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FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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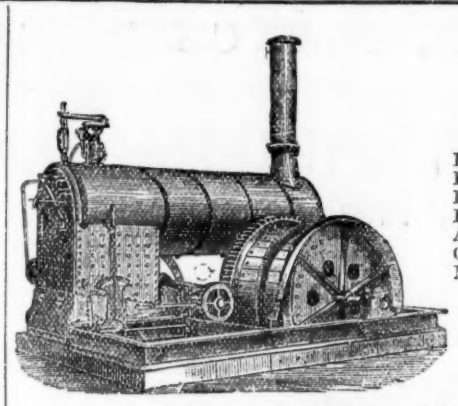

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HAULING AND WINDING ENGINES, all sizes.
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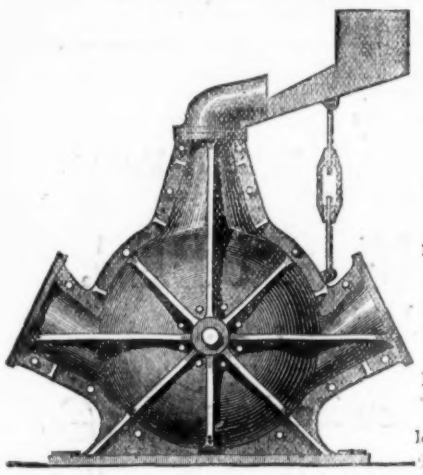

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THESE PATENT MACHINES ARE VALVELESS.

RESULTS OF TRIALS at CARDIFF EXHIBITION, on a block of Cornish Granite, on 24th September, 1881:—

	Inches.	min. sec.
Normandy Rock Drill and Air Compressor, bored	1 5/16 × 10½	in 2 10
Eclipse Rock Drill and Reliance Air Compressor	1⅜ × 10½	in 2 25
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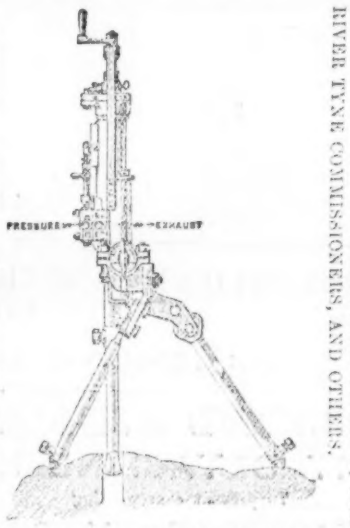

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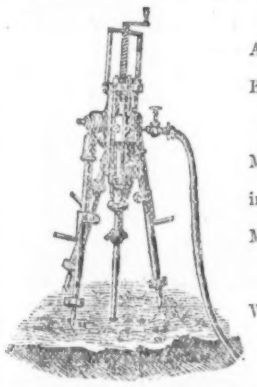

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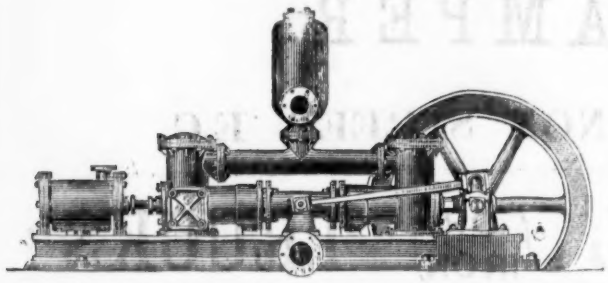
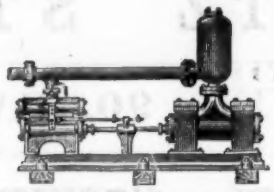
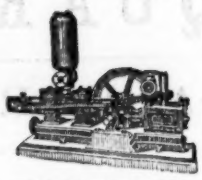


The "Original" Double-acting Ram Pumping Engine.



Hydraulic Pumping Engine for Collieries. Worked by Natural Head of Water, and saving much manual labour.



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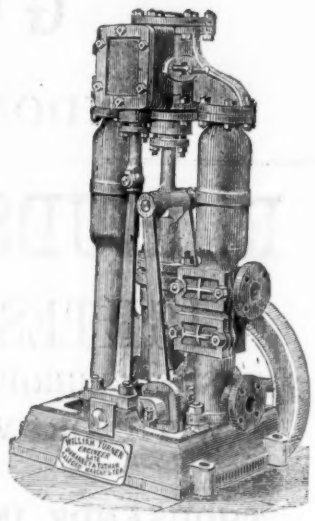
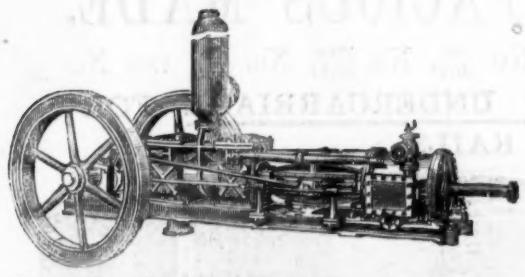


The Salford Pump.



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To prevent over winding

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Winding and Hauling Engines,
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Mining Machinery of every description.
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LIEBIG'S EXTRACT OF MEAT AND MALT WINE
(COLEMAN'S).
A DELICIOUS BEVERAGE AND TONIC.

IMPORTANT TESTIMONIAL.

Queen's Crescent, Haverstock Hill,
London, March 5th, 1881.

DEAR SIR,—Some time since, being greatly fatigued with overwork and long hours at business, my health (being naturally delicate) became very indifferent. I lost all energy, strength, and appetite, and was so weak as to be scarcely able to walk.

As you are aware, I sent for a dozen of your Extract of Meat and Malt Wine, which, in a few days, pulled me up marvellously. Three or four glasses of it daily have quite altered and restored me to better health than ever, "without the assistance of a doctor."

I am now giving it to my son, twelve years of age, whom we have always thought consumptive, and from a puny ailing boy he seems to be fast growing into a strong healthy lad.

Enclosed you have cheque. Please send me two dozen of the "Extract." With thanks for your prompt attention to my last

I am Sir, yours truly,
GEORGE A. TYLER.

Pints, 30s.; Quarts, 50s. per dozen. Carriage Paid to any Railway Station. Sample Bottle sent for 33 stamps

Post-Office Orders and Cheques payable to—
COLEMAN AND CO.,
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Sold by all Druggists in Bottles 2s. 9d. and 4s. 6d. each. Ask for Coleman's Liebig's Extract of Meat and Malt Wine, and "See that you get it."

COLLIERY VENTILATING TUBES.

WILLIAM THOMPSON,

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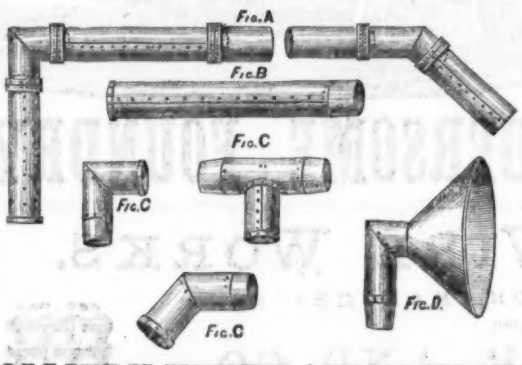

COLLIERY VENTILATION TUBES.

Fig. A,—Shows the tubes adapted for any variation in direction.
Fig. B,—Straight length of tube.
Fig. C,—Different angle bends.
Fig. D,—Is a hopper to receive air at top of shaft.

Wrought-iron Buckets.
Baskets, Kegs, Pit Tubs,
Ash Barrow Bodies,
Ventilating Tubes for Collieries, Tanks,
Kibbles for Copper Mines, &c. General Sheet Iron Worker.

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VENTILATING TUBES AND AIR VALVES FOR MINES.

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GAS, STEAM, WATER, AND GALVANIZED TUBES AND FITTINGS, PATENT LAP-WELDED IRON, AND STEEL TUBES.

For Marine and Locomotive Boilers, Hand-rails, Ship Pillars, Coils, &c.
Tubes and Fittings for all Engineering Purposes.

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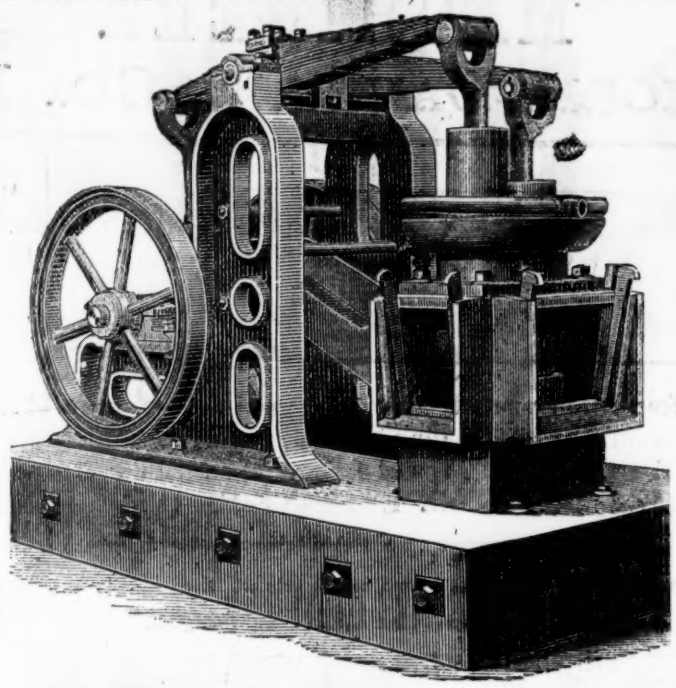
GOLD QUARTZ.

These Machines are guaranteed to reduce more Quartz with less applied power than any Machines in the market.



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INVITATIONS WITH PROSPECTUSES WILL BE SENT TO THOSE INTERESTED ON APPLICATION.

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WITH OR WITHOUT "END" DOORS AND "SWIVELLING" UNDERCARRIAGE FOR TIPPING AT EITHER SIDE OR END OF RAILS.

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EXTRA STRONG PERFORATED ZINC AND COPPER RIDDLES AND SIEVES

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Shipping Orders Executed with the Greatest Dispatch

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CAST STEEL FOR TOOLS. CHISEL. SHEAR. BLISTER. & SPRING STEEL

MINING TOOLS & FILES of superior quality.

EDGE TOOLS, HAMMERS, PICKS, and all kinds of TOOLS for RAILWAYS, ENGINEERS, CONTRACTORS, and PLATELAYERS. LOCOMOTIVE ENGINE, RAILWAY CARRIAGE and WAGON SPRINGS and BUFFERS.

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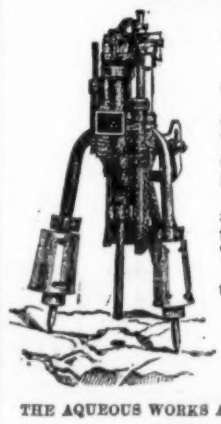
THE "BEAUMONT" PATENT PERCUSSIVE ROCK DRILL.



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The "BEAUMONT" DRILL is now offered to the public.

For the last three years it has been solely used with complete success by the Aqueous Works and Diamond Rock Boring Company (Limited), and Messrs. Beaumont and Co. in their several large contracts.

During this time it has been so improved and developed as to make it without doubt the best Percussive Rock Drill offered for Tunnelling, Mining, or Quarrying Work.

Price and prospectus on application to the Manufacturer,—

JOSEPH FOSTER,

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THE AQUEOUS WORKS AND DIAMOND ROCK-BORING COMPANY (LIMITED).

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Pumping Engines for Mines, Water Works, Sewage Works, and General Purposes.

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Hydraulic Pumps.
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Air Compressors.
Man Engines.
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APPLICATION.

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"CORNISH" ROCK DRILL.

1ST SILVER MEDAL.

MINING INSTITUTE OF CORNWALL. 1881.

This machine has been constructed after a long practical experience in the requirements necessary for Cornish mines. The result has more than realised our expectations. Our chief objects in view were GREATER DURABILITY and LESS LIABILITY TO DISARRANGEMENT, but it has also proved itself MORE EFFECTIVE. (Vide Report.)

CAMBORNE, 8TH DECEMBER, 1881.

MINING INSTITUTE OF CORNWALL.

SIR,—Having been requested by the Council to superintend the Rock Drilling Machine Contest, held at Dolcoath Mine to-day in connection with the above Institute, I beg to hand you the following report:—

The competing machines were the "Barrow," the "Cornish," and the "Eclipse"—each was fixed on the same mounting bar, and bored into the same stone. The result of the boring were as follows:—

Name of Machine.	Diameter of cylinder.	Diameter of Drill.	Time boring.	Depth bored.	Cubic inches of ground cut.	Cubic inches cut per minute.	Mean pressure per square inch.	Remarks.
	In.	In.	Min. Sec.	In.			Lbs.	
Cornish	3½	2	1 15	4½	14·1	—	—	
"	—	1¾	55	9	21·6	—	—	
Total	3½	—	2 10	13½	35·7	16·4	61	
Eclipse	3½	2	40	—	—	—	—	Ran into Cornish hole; hole not properly watered.
" second try	—	—	2 0	1	3·1	—	—	
" third try	3½	2	2 35	11¼	35·3	13·6	60	
Barrow	4	1¾	15	⅛	1·2	—	—	Gland to mounting bar broke.
"	—	—	2 0	8¼	19·18	—	—	
Total	4	1¾	2 15	8⅜	21·0	9·3	60	

I am, Sir, your obedient servant, JAMES HOSKING, M.E.

To R. H. Williams, Esq., C.E., President of the Mining Institute of Cornwall.

Address— HOLMAN BROS.,

CAMBORNE FOUNDRY AND ENGINE-WORKS, CAMBORNE, CORNWALL.

The Only Knapping Motion Stone Breaker and Ore Crusher.

AWARDED THE ONLY SILVER MEDAL FOR MECHANICAL EXHIBITS AT THE ROYAL CORNWALL POLYTECHNIC SOCIETY, FALMOUTH, SEPT., 1881.

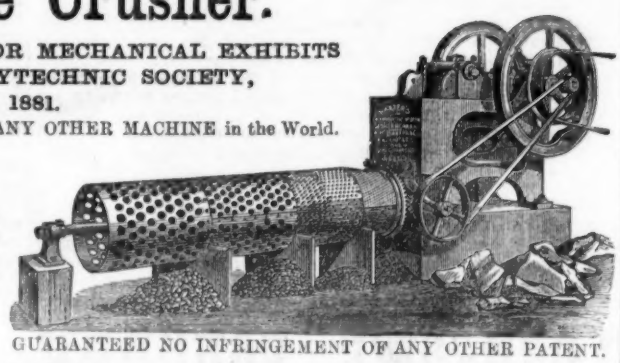
GUARANTEED to do MORE WORK with less power THAN ANY OTHER MACHINE in the World.

READ THIS—

The Bold Venture Lime and Stone Co., Peak Forest,
Messrs. W. H. Baxter and Co., *June* 8, 1881.

GENTLEMEN,—We have the pleasure to inform you that the 20 by 9 Stone Breaker supplied by you is now working to our entire satisfaction, and we are now able to fulfil our contract with ease, which we had much difficulty in doing before with the Blake Machine. It takes less power and turns out considerably more stone. Yours truly,

BOLD VENTURE LIME AND STONE COMPANY.



GUARANTEED NO INFRINGEMENT OF ANY OTHER PATENT.

These Machines turn out the same amount of work with less than half the power, and make a better sample of Road Metal, with 50 per cent. less waste, than any other machinery, and for Crushing Purposes they are still more advantageous, as the sudden action entirely dispenses with the clogging when used for crushing softer materials, and thereby saves many breakages and a great waste of power. There is also a saving of fully 75 per cent. of lubrication required over the Blake Machine, and as a proof of this, our driving shaft never becomes heated. We are also prepared to guarantee our driving shaft from breakage in any of our Knapping Motion Stone Breakers.

We have already supplied our Machines to Derby, Harrogate, and Falmouth Local Authorities; besides several Quarry Owners, Contractors, Plaster Manufacturers, Mining Companies, &c.

FOR FULL PARTICULARS ADDRESS TO THE PATENTEES AND SOLE MAKERS,

W. H. BAXTER & CO., ALBION STREET, LEEDS.

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OF ALL SIZES AND ANY GAUGE OF RAILWAY.
OF GREATLY IMROVED CONSTRUCTION
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SOLE MAKERS OF RODGERS' PATENT WROUGHT-IRON PULLEYS.

UNDERGROUND HAULAGE.

At the North Staffordshire Institute of Mining and Mechanical Engineers meeting held at Stoke-upon-Trent on Monday, when Mr. John Brown presided, a paper was read by Mr. J. R. Haines (the secretary) on "Underground Haulage." He classed underground haulage under three heads—1. The tail-rope system, which was until the last 20 years in use in the northern coal field.—2. The endless-rope system, as in operation in Nottinghamshire, Lancashire, and Midland coal fields.—3. The endless-chain system, usually adopted in the coal fields of Lancashire and those of the Midland Counties. It had been stated that the Staffordshire coal field presented as many difficulties, if not more more than any, in the excavation of its minerals. In his opinion this remark very justly applied to the application of underground haulage, and to some extent was a reason why it had not been more generally adopted. In what might be termed the old South Staffordshire coal field the limited area of the royalties and the presence of faults to a certain extent rendered underground haulage either impossible or not worth the outlay. In North Staffordshire the royalties were of greater extent, and were generally more free from faults, the seams nearly all reposing at angles varying from 10° to 45°. In many cases the shafts were sunk below the seams to be worked, and cruts were driven (a little to the rise) intersecting the different seams. Levels were carefully driven in each seam a little to the rise. Self-acting incline planes were then turned away, generally at right angles to the level line, and advantage taken of the repose of the seams to bring the produce to the main levels. With good main levels properly driven—that was, when the resistance was the same in both directions, the fall being with the load, and well-constructed trams (with wheels fast on the axles) a fair amount of work was performed by horses; but when the rise coals were exhausted to the area to be worked lay to the deep of the pits, underground haulage had better be adopted. He described two systems in use which he thought might be so modified as to be applicable to the many very different circumstances that presented themselves in North Staffordshire. First, as to the endless-chain system, applicable for mines having a regular inclination of more than 12 in. in 1 yard, and which had or had not stations on the main incline. A horizontal engine, single cylinder 25" diameter, 4 ft. 5 in. stroke, drawing wheel 10 ft. 3 in. diameter, and spur gearing, four egg-ended boilers 3 ft. long, 6 ft. diameter, three on the surface and one underground; weight of chain 22 tons; rails, weight per yard, 25 lbs., length each 9 ft.; gauge of water, 2 ft. 6 in.; tubs, average weight empty, 10 cwts., carrying when full of coal 15 cwts.; work done, 500 tons per day of 10 hours; cost of labour per day, 2*l.* 3*s.* 4*d.*; consumption of coal per day, 1*l.* 2*s.* The engine plane on which the chain was used was 600 yards in length, and descended at an angle of 27°, or 18 in. in the yard. The engine for hauling the coal up was placed at the top end of the plane, and worked the chain by a horizontal driving wheel. The chain ran on rollers placed 75 ft. apart. Only one tub was put on at a time, the distance between each tub being about 50 yards. There were eight stations on the plane, at each of which the empty tubs had to be delivered and full tubs brought away. The chain travelled at the rate of 2 miles an hour, and at that speed the tubs could easily be connected and disconnected at the station without stopping the engine.

In attaching an empty tub at the top of the incline the tub was brought close to the commencement of the incline, and the short chain was connected to the tub in the first place and then to the chain, and immediately after the last connection the tub was pushed forward on to the incline. When the full tub came to the top of the incline the chains were disconnected just at the time where the tub coming on the level took the weight off the short chain. With regard to the tail-rope system, combined with the engine-plane system, applicable for mines having a long crut to the seams to be worked and which seams lay to the deep of the crut, having a regular or irregular inclination of not less than 12 in. in the yard, the engine plane having or not having stations on the main incline, there would be required a horizontal engine, 16 in. cylinder, 3 ft. 6 in. stroke, with spur gearing, working two drums, main tail rope running loose, fitted with clutch boxes, the main rope drum carrying 1700 yards of 1¾ in. circumference plough steel rope, the tail rope drum 1000 yards ditto; two boilers below ground working a pressure of 45 lbs. per square inch; tubs, average weight when empty 4½ cwts., carrying when full 8 to 9 cwts.; work done 350 to 400 tons per day of nine hours, besides dirt, which was a considerable amount; cost of labour 3*l.*, or 1·80d. per ton; fuel, stores, &c., 6*s.* 1*d.*, or 0·53d. per ton. The crut or crossing on which the tail rope system was applied was drawn from the pit bottom for 800 yards in length, and rose about 1 in 50, or a little more than ½ in. in the yard. The crut intersected the Main coal and the Yard and Half coal (which were about 25 yards apart vertically and reposed at an angle of 8°, or 1 in 5 in.) at 650 and 800 yards respectively. Dips were driven in the respective seams, and each one was at present door about 300 yards. The tail-rope system was applied to a point in the main crut about 770 yards from the shaft, at which place the pulley was fixed round which it worked The coals were brought (by the engine planes) from six stations in Main coal downhill and four in the Yard and Half coal. The engine hauled the full tubs from the stations on the downhills, the main rope being used for those in the main coal and the tail rope of those in the Yard and Half coal. The empty tubs pulled the ropes out. Eight tubs were brought up each downhill at one time; when a full set—56 tubs—was made up the main rope was attached to the loads and the tail rope simply taken round the pulley and put on the back of the set. It took 20 minutes to make up the train load or full set of 56 tubs out of the two downhills, and from 5 to 6 minutes to take the journey out and bring in the empties by the tail-rope system. Replying to questions Mr. Haines said after the tail rope worked off the tubs gravitated down the downhill and took the tail rope with them. The main and tail ropes were both made hauling ropes alternately. The system was one which he had never seen at work elsewhere than at Longton. The paper was ordered to be printed, and it was decided that it should be discussed with one on the same subject by Mr. W. R. Wilson.

At the same meeting, Mr. Harold Bonser read a paper on "Blasting Gelatine," which he strongly recommended as a new explosive, more effective than dynamite and safer than powder.—Mr. Tanton (Talk-o'-the-Hill) and Mr. Nicholls (Great Fenton) spoke favourably of the new blasting agent, and a vote of thanks was passed to Mr. Bonser for having brought the subject forward.

Mr. W. D. Phillips, traffic manager of the North Staffordshire Railway, was elected a member of the Institute.

CONTINUOUS RAILWAY BRAKES.—Mr. Michael Reynolds's long-promised book on the important subject of continuous railway brakes will be published this week by Messrs. Crosby Lockwood and Co., of Stationers' Hall-court.

HOLLOWAY'S PILLS.—INDIGESTION.—How much thought has been bestowed, and what voluminous treatises have been written upon this universal and distressing disease, which is with certainty and safety dispelled without fear of relapse by a course of this purifying, soothing, and tonic medicine! It acts directly on the stomach, liver, and bowels—then indirectly, though no less effectively, on the brain, nerves, vessels, and glands, introducing such order throughout the entire system that harmony dwells between each organ and its functions. Dyspepsia need no longer be the bugbear of the public, since Holloway's Pills are fully competent to subdue the most chronic and distressing cases of impaired digestion, and to restore the miserable sufferer to health, strength, and cheerfulness.

Original Correspondence.

GOLD AND DIAMOND MINING IN SOUTH AFRICA.

SIR,—The diamond market here is still very much depressed, and the general business throughout the diamond fields is more stagnant now than I have ever seen it before; nevertheless, the shares in the majority of good companies are firm, but for some unaccountable reason the shares of the Standard—which is a good company, and has just paid a dividend at the rate of 30 per cent. per annum—has fallen to 15 per cent. below par. The Central Company are piling 50,000 loads of diamond soil as a reserve; this is a very good idea, as it will enable them to regulate their returns. The Barnato ground is literally full of diamonds; they are finding very well indeed, and if they do not get a fall of reef they will pay a very large dividend; the same may be said of the British company. The French company are still hauling out a very large quantity of reef; I regret to say their large new engine is a failure. There has been no engines introduced on these diamond fields as yet equal to the Robey—that is, when they are properly constructed. With good management there are very few companies anywhere superior to the French. The Rose Innis Company are still troubled with reef, and notwithstanding the rapidity with which the reef is being removed the whole mine is in a bad state.

At Bultfontein the drop in the price of diamonds is seriously affecting all the companies. The London and South African Exploration Company are acting towards the diggers like veritable "Shylocks," and are surely "killing the goose that lays the golden eggs." The South African diamond mines are at present passing through a very trying ordeal, but nothing more than is incidental to all kinds of mining at some time or other; and if the London and South African Exploration Company were to offer a little timely assistance to those to whom they owe so much, it might enable several struggling companies to tide over their difficulties, which must otherwise cease operations. I informed you in my last that all the companies in Koffyfontein had ceased operations. Since that time six companies in Dutoitspan, representing a capital of 400,000*l.*, have stopped working, and consequently a large number of white men are out of employ. Several other companies must soon follow. There is not one of these companies but what might be worked at a very handsome profit if re-floated on a sound basis and properly managed. The Kamfersdam Mine is improving, and is likely to turn out a good concern.

The excitement about Otto's Kopje has not subsided; I believe they are finding pretty well—in fact, I have seen some good diamonds from there, but nothing to make any fuss about. In fact, it seems to me perfectly absurd for persons to speak of Otto's Kopje in its present undeveloped state as another Kimberley, especially seeing that the claims in the former are selling below 50*l.*, whilst in the latter, after yielding so many millions sterling, the claims are worth quite 1000*l.* each. Money is so scarce here at the present time that I have no hesitation in saying if during the next three months investors were here with capital they could double their money in 12 months, and in many cases very much more than double it. Of course, they will have to exercise the ordinary amount of caution, because there is some ground even in the Kimberley Mine not worth a farthing.

Reports from the Transvaal are of the usual glowing and lying description, but the facts are as follows:—The estimates for the current year have been placed before the Raad, who remitted them to the Chairman of a committee of ways and means for investigation. As the estimated revenue is only 247,043*l.* against an expenditure of 417,621*l.*, it will be interesting to observe how this financial problem will be solved. The revenue has been derived from the sale of concessions at the expense of the English people, and the captured cattle of the Kaffirs. The principal expenditure has been in shooting blacks and providing surplus ammunition for future operations.

My attention has been called to a letter of Mr. D. Francis, in the South African of April 20, which I can only characterise as frivolous. He knows that in every reference I have made to the "Tatin" I have spoken in its favour; and I may tell him that I know that his concession is good, and contains more gold than all the Transvaal put together, and this is a repetition of my previous statements. When he so unscrupulously attributes motives to another I would remind him that if "speech is silvern," "silence is (sometimes) golden." He knows well that one of my principal objects in referring to the Transvaal gold fields has been to try and procure justice for a few honest hard-working diggers, who, through long years of hardship and toil, have succeeded in finding a few payable patches of gold, and whose honest rights are being confiscated by an impecunious and corrupt Government at the instigation of a few unscrupulous adventurers. Being an old digger himself, I am surprised to find him going against the party whom it is duty to support. I must also remind him that I know of persons who have purchased gold at one place for the manufacture of veins in another; he may do as he likes, but I will not connive at any such transactions, even though it were the means of getting my friend the very big commission he speaks of. I may further inform him that "my man of experience," as he calls him, could not be induced to go again to such an insalubrious place as the Tatin for all the gold the country contains. What he says about the natives at the Tatin being a peaceable tribe is quite correct, but ever since the late action of the British Government in the Transvaal every native tribe from the Zambesi to the Cape has exhibited a feeling of unrest. Traders returning from every part of the interior inform us that the natives move about with ominous countenances, and their hands on their assegais; that the indiscriminate slaughter of natives by the Boers all around the Transvaal border is driving the various tribes to desperation, and that there are unmistakable signs of a breaking out amongst the Kaffirs such as have never been known in Africa; these are the opinions of men who have traded and lived amongst the natives all their lifetime.

One year has scarcely elapsed since the saintly Boers drove the English out of the Transvaal, and since that time they have made war on Montsioa, Ikelefeng, Gonpanee, Gasibone, Mankorane, and several small tribes, or perhaps it would be more correct to say they have murdered several thousands out of each tribe, and stolen their cattle. At present the Boers are trying hard to get "Sekukimi," who has been restored to the chieftainship, to fight his brother, "Mampoor," who was placed over the "Bapedi" by Sir Garnet Wolseley. The Boers have sent a commando to assist the former. Commandeering is going on in the Transvaal for the purpose of sending a large force against "Mapoch," who is likely to be assisted by the "Swazis." If it be true that the Swazis are to help Mapoch there is likely to be some hot work, and it is difficult to say where it may end.

Many readers will be glad to know that since my last our faithful old ally, Mankorane, has gained another victory over the Boers. There are about 700 Boers and a large number of natives in three camps near Taungs. In the recent encounter they drove in Mankorane's natives, but in doing so lost 17 of their number, and several blacks. On the following day Moolali, a son of Mankorane's, captured 60 horses belonging to the Boers, and in doing so killed four Boers and wounded a large number. However, as Mankorane has no means of getting ammunition, and the Boers are well supplied from the Transvaal and Free State, his destruction is considered only a matter of time. The foregoing facts require no comment to show what a blessing self-government is to the pious Boers, or what an irreparable injury the recent British blundering in the Transvaal has done to the whole of South Africa. The British Resident is hoodwinked and cajoled by the pious Boers who surround him with a fence of steel, and thus deprive him of every means of getting information. The wily Boer leaders, seeing that their little game of isolating the Resident is nearly played out, and that the public are taking the matter in hand, have sent one or two wily foreigners to England to try and cajole the British public; they go ostensibly for some other purpose, and as they were traitors to the late Government they expect to get a ready sale for anything they may offer. The Boers and their satellites do not want the English, but they are trying very hard to get their money. I shall, therefore, strongly advise British and French capitalists not to have anything to do with a province and people where neither their lives nor property are safe.

My letters from the gold fields have only just come to hand; I will give you full particulars next week. They say that some fellows of very doubtful reputation have gone to Europe to float companies on behalf of certain concessionaires, and one digger facetiously remarks, "by their speech and their noses ye shall know them."

Kimberley, May 26. CORRESPONDENT.

P.S.—I have just time to append the following letter from the Lydenburg gold fields which has just appeared in this morning's Diamond News, and further to say the Spitz Kopje property of White and Co. is improving. Mapoch threatens to break out, and says that the Boers will have to bring more than 600 men. Of course, our heroes have become haughty, and will exterminate him in a few days. To judge by the wars in Zoutspansberg and Lydenberg I think that before another year has gone by a civil war will be raging, and the English Government will be forced to interfere. Altogether the aspect of affairs is very gloomy indeed, and in spite of the suppression of the news by the Dutch papers we hear a deal, and things are rotten in Denmark. I candidly believe that if the Boers opened their hearts their mouths would say that they regretted fighting the English. This applies solely to the populace and not to officials. The notorious Erasmus is Commissioner of Lydenberg district, and makes his power felt. All these minor affairs tend to make a mighty edifice of discontent, which is merely awaiting a pretext.

TREATMENT OF AURIFEROUS SULPHURETS.

SIR,—As so much attention is now being directed to the various methods of treating auriferous pyrites possibly many of your readers may be interested to learn what measure of success has been attained in the reduction of such mineral. The mineral treated by the St. John del Rey Company, at their mines in Brazil, contains between 40 and 50 per cent. of pyrites, and a large portion of that arsenical. Quicksilver will not attach itself to the gold easily, but the two metals have to be kept in contact until they do amalgamate; this necessitates a certain amount of interruption in the process, but cannot be avoided. The amount of mineral treated per day is from 150 to 200 tons, the cost of extracting the gold and returning it in bullion, passing through the following processes—stone-breakers, stamping mills, concentrating sluices, arrastras, re-stamping, re-concentration, amalgamation, sublimation, assaying, and gold melting—is found by looking at the company's printed report for June, 1881, to be 4s. 11¾d. Although this figure includes all wages, salaries, and repairs to machinery, yet it is considered very high.

If the output of mineral from the mine had been as large as that of the previous year the cost per ton would have been 3s. 7½d. The mills were not kept plentifully supplied with mineral. It must be clearly understood that no steam-power is used, but all the motive-power is derived from water. For many years the company has given the most brilliant opportunities to inventors and patentees, and has spent a great deal of money in experimenting on a large scale in order to improve or introduce a better system for the reduction of their mineral; but the old process has held its own against them all, and the world fails to produce anything equal to it for cheapness or efficiency.

I see a letter in your valuable Journal of June 17, signed by Mr. J. S. Trotter, giving an interesting account of Mear's process; he puts down mining and milling at 1*l.* 10s., take out 1*l.* for mining and his figures would stand as follows:—Milling, 10s.; roasting, 15s.; chlorination, 12s. = 1*l.* 17s. per ton, which does not compare favourably with 3s. 7½d. Now, what is wanted for India is a cheap process for low grade ore, I say low grade ore because no miner or reasonable man ever calculates upon raising from any mine 150 or 200 tons of mineral per day worth more than ½ oz. or ¾ oz. of gold per ton. I believe Mear's process will treat up to 95 per cent. of the assay value of the mineral which is subjected to the action of chlorine. This corresponds to the amalgamation machinery of St. John del Rey, which also gives a duty of 95 per cent., the loss in concentration would be equal in both cases, as only a small percentage of the mineral stamped would be subjected to amalgamation or chlorination.

E. FOX BUTLIN,
Late Reduction Officer to the St. John del Rey Company.
Broadway Chambers, Westminster.

ELECTRICITY, INDIAN GOLD, AND MINING.

SIR,—A year or two ago the British investing public suffered from that severe epidemic, "Indian gold on the brain." Young men and maidens, old men and matrons, rushed eagerly to offer up their hoards at the shrine of Indian company promoters, and sat down in perfect confidence to await the arrival of their respective shares of the glittering treasure coming to them from the East. This it is needless to say they are still waiting for, and not unlikely to have to wait longer; the suspense of some, however, has been mercifully ended by the intervention of the law, as the Vice-Chancellors' Courts can testify. Some again still live in the original hope which prompted the investment, all the Indian gold mines not being yet wound-up; in fact, a few still hold out promise of reaching the successful goal they aim at, but still the fact remains—Indian gold mining, like everything else a special craze sets in for, has been overdone, and its victims cover the land.

The difficulty in securing the necessary capital to build the first railways, and the distrust in their success, which at the time was so general, stands out in strange contradistinction to the great rush at the present time existing for electric shares. This craze which we have now upon us, is tinged with probably a "spark" more wisdom than the Indian gold one; but is it not also getting overdone? It must be borne in mind that electricity is only in its infancy. There is great reason to look forward to a far greater development of its powers and application, while from its still but imperfectly developed state it is quite on the cards for some clever electrical student to make such a discovery as will throw all our present knowledge of it into the shade, and at one fell blow sweep away, by cheaper and simpler means, the golden visions of profits of possibly all these pioneer companies formed and forming. The prospect under such circumstances is not a particularly bright one for investors, who have already parted with their money in electric ventures, but the craze is on, and anything bearing the magic word "Electric" will still draw the money. I am not aware of any of these undertakings having reached Lincoln's Inn yet, but they can hardly all be successful, and will no doubt yet be fairly represented at that temple of woe, and it may be further noted as a suggestive fact, that not a single existing company has as yet realised any commercial profit accruing from the supply of the light, which at present is more expensive than gas, while the profits so far apparently gained by what may be termed the parent companies is altogether derived from the sale of certain rights under their respective patents granted to subsidiary undertakings. If people must speculate why do they not turn their attention to the great and well-known mineral deposits in our own land? Here a grand field is open for them, and one in which fortunes have and are still to be made, but when something new, untried, and risky is introduced they seem to rush after it, like the moth and the candle, and even when they have burnt their wings they appear quite willing to do so again when the next craze sets in. The consequence of all this is that one of the greatest and most lucrative of our home industries is neglected, and a deserving class of hardworking men are left to starve or emigrate, which latter without a little money is not always possible.

In our own land, and in some of our colonies, there exist immense districts which have been proved rich for different classes of metal, and which only require the application of capital to make enormous returns, and most handsomely repay the adventurers. South Australia abounds in all descriptions of metals, and it may not generally be known that even cinnibar is to be found there. There is a company, the Corporation of South Australian Copper Mines, which possesses no less than 88 mines in a district proved of such great metalliferous wealth that the Colonial Government have built a railway 200 miles long to assist its development, and bring the ores to the smelting-houses in Adelaide. Canada is rich in metallic ores, and will one day add greatly to her riches by their development. It is quite on the cards that a few weeks more will see the United States of Colombia taking high rank amongst the gold producing countries of the world. The Organos Gold Mine in this country is now returning 10 ozs. of gold per ton, and its success is likely to be followed by the Colombian Hydraulic Gold, which is making good monthly returns. From the Pyrenees we learn that the Sentein Mine is once again going to make large returns of silver-lead ore, and under the able management of Messrs. John Taylor and Sons there appears little reason to doubt another great success.

Turning to our own country, we find in Wales many good mines idle through the low price of lead, and a preference for Indian gold mines and electricity. I think I should prefer the Old Lisburne Mine in Cardigan to either; it has returned 243,800*l.* on a capital of only 7500*l.*; and the West Lisburne close by, and on the same lodes, though only a progressive mine as yet, could be placed on the Dividend list at a cost of but little more time and money. Many of the copper and tin mines in Cornwall are in active work, but many again are still idle; such mines as Gunnislake (Clitters), Bedford United, Wheal Crebor, Prince of Wales, and Devon Friendship, with many others, are doing well. Mining in the Duchy is carried on more satisfactorily now than in former years, when mining captains lacked the confidence they now, as a rule, possess. A little anecdote I heard some years ago will probably best illustrate this. A most unfortunate investor in Cornish mines, in a fit of despondency expressed a wish to see the devil and his establishment. Through the instrumentality of a friend he got an order to view the premises, and a letter of introduction to his Satanic Majesty. On arriving, he presented his letter to the devil, who was very civil, and showed him all over the place. Just as he was leaving he saw a number of swarthy rough-looking men outside, making a great row. "Who are those?" he asked. "Why," said the devil, "those are Cornish mine captains, and they want to get in here, but I won't have them, as I am determined to keep this place respectable." I don't believe this story myself, but in justice to Cornish mining captains I should say they are now eligible.—*London June 22.* G. E. H.

KAPANGA GOLD MINING COMPANY, AND ITS FUTURE.

SIR,—Can anyone explain the anomaly of the conduct just now exhibited by the mining prophets who are raving about the possibility of a return of 10 dwts. to the ton from some mines (only a possibility mind, not a reality), on the strength of which they have bolstered them up several hundreds per cent., while a mine which is quietly returning all the most sanguine of them ever dreamed of seems to have eluded their notice altogether, and is at a discount though actually returning 3 ozs. to the ton. Perhaps a discerning public will avail themselves of this opportunity before the prophets send their circulars round offering them Kapangas several hundreds above par to which the returns may carry them if the present price of Indians on their returns produced is any criterion of the value of gold mine shares.—*Derby, June 21.* W. T. C.

PECULIAR GOLD-BEARING FORMATION—AUSTRALIA.

SIR,—The account of the recent discovery of gold at Kilkivan (Queensland) in a dyke or lode of porphyry, &c. (instead of the usual quartz reef) may not only be interesting to your readers, but also possibly lead to the discovery of like deposits in other countries where the like formation exists. The Brisbane Correspondent of the Sydney Morning Herald writes that there has been a good deal of excitement among local mining speculators in consequence of an apparently rich gold discovery at Kilkivan. The gold occurs in a rather curious formation; there is a lode or dyke of mixed porphyry and other loose stone lying in layers, with numerous veins of manganese dust—the black oxide I believe. This lode, which is about 15 ft. wide, seems to intersect a hill vertically; it has no walls, and is apparently very rich; the stone is gold-bearing, and the black manganese dust is spangled with the precious metal, so that the discoverers must have a very fortunate find.

There is something very remarkable about the manner in which this deposit was found. The old Kilkivan alluvial gold workings are at the foot and on the slopes of the hill where the lode was found; they covered a limited area of ground, but it was full of gold, and the metal seemed to follow the course of a number of gullies, all radiating from the one spot near the crest of the hill. The alluvial was "rushed" soon after Gympie opened, being not more than 25 or 30 miles from that place, and was quickly worked out. No reefs were found, and the diggers speedily left the place to search for new fields. A few miners, however, struck by the singular manner in which the gold seemed to descend from the hilltop, began to search for the reef which, as they supposed, shed it. Gold was found in various places, always contained in this black manganese dust, either in veins or "pockets," but no sign of a reef could be found. About six or seven years ago two of a party of persevering searchers were out on Sunday horse hunting, and sat down to rest and smoke their pipes in a gully about 1½ mile distant from their camp, and one of them, digger fashion, chipped away at the rock on which he sat; he found that it contained specks of gold; this led to further exploration, and the discovery of a reef which was named the Rise and Shine. A string of claims were taken up, a machine erected, and work went on. The Rise and Shine was accepted by some of the miners in a vague way as the missing reef; it had "dived" after shedding the Kilkivan alluvial. A digger explained to me when I was talking with him and looking at the puzzling hilltop where there should have been a reef, though none could be found; at that time it was a dreary looking place. The slopes of the hill had been long before cleared of trees, and being covered with rich soil thoroughly trenched and cultivated by the thick clustering shallow pits of the old workings, was clothed in a rich swarth of grass. All around were half-buried remains of the buildings hastily erected when the "rush" was at its height, and 5000 or 6000 men occupied the empty space which then surrounded me. A store still remained kept up because it was a convenient centre for the old groups of miners and prospectors who were at work in the surrounding country; but no one was working on the field, the hilltop was deserted, and only two or three depressed looking Chinese gleaned a few grains by washing and re-washing the sand in the creek bed.

This was the position in 1876, but the Rise and Shine did not realise the hopes formed of it. There was gold in the stone, but it was not very rich, and the newly-opened reefing centre languished. Then some miners went back doggedly to work, tunnelling into the mysterious hillside, determined to wring its secret from it; it was not till within the last few weeks they succeeded; it is said that they went on a long distance beyond the formation I have described still looking for the reef. That the thin veins of manganese dust contained gold they knew, but it was just the stuff that was to be found everywhere, and it was almost lost in the layers of stony stuff. What they did not suspect at the time was that the stone itself contained gold. However, just when their patience was faling them, and they had some thoughts of abandoning their tunnel, it occurred to them to try a prospect from the curious formation they had gone through; they did so, and the result induced them to cart some tons of the stuff to the machine at Gympie, when it gave a return of 4 ozs. to the ton; and then they concluded that this 15-ft. dyke was the reef they were looking for, and the matrix from which the Kilkivan alluvial originally streamed down the hill slopes and into the flat at their feet. This, at least, is the conclusion to which Gympie speculators have jumped. The whole hillside has been secured, and speculation is rife in Kilkivan Long Tunnel shares and the neighbouring leases. Of course, it is impossible to say what the value of the deposit may really be, but it appears certain that a good deal of gold will come from the hill. The tunnel has cut the dyke at some distance from the crest of the hill, and the same formation is traceable on the top, so that the existence of a considerable block of the gold-bearing mixture may be said to be proved. For some time to come, therefore, the place that I saw six years ago looking so desolate will again awake and exhibit something like its old activity.

Hitherto it has been an article of faith among reefers that reef gold only existed in quartz, although the late discovery of fine free gold in the serpentine rock itself at Lucknow, New South Wales, goes to prove that quartz is not the only matrix for it; and now that it seems it may also occur in porphyry, it may lead to fresh discoveries in other hitherto unlooked for sources. Kilkivan itself is the centre of a remarkably rich mineral district for gold, copper, silver, and cinnabar, in some lodes the three first metals being blended together as in the Mariner's Reef, which assayed as high as 15 per cent. copper,

270 ozs. silver, and 80 ozs. gold per ton, whilst even the poorest of it showed over 5 ozs. gold; it was, however, so variable in yield, and the carriage so heavy (then 1870), that it was finally abandoned, although the lode was 3 ft. thick, and over 700 tons were raised from it, 500 of which were crushed at the Black Smoke Battery, and only yielded ½ oz. of free gold per ton, which did not pay expenses even.

Sydney, May 6. R. D. A.

FRONTINO AND BOLIVIA MINING COMPANY.

SIR,—I have this morning received the report for the half-year ending Dec. 31, and I beg at once to enter my protest against the course which the directors propose to take in reference to Mr. White's report. In all fairness such report ought to be printed and circulated amongst the shareholders prior to the meeting, for two important reasons—first, to give them an opportunity of considering it before they are called upon to come to a decision upon it; and, secondly, because it is not fair to occupy the time of the meeting in reading such a document, and then and there to call upon the shareholders to come to a decision upon it.

Neither can I understand why such report should not contain Mr. White's explanations as to how he considers the mines should be dealt with in future. Indeed, in my opinion, this is the most important part of the report, and my reasons for considering that the report ought to be printed and circulated before the meeting apply with much greater force to this part of it. After what has passed I can only look upon the course the board proposes to adopt as intended to occupy as much of the time of the meeting as possible, so as to allow the shareholders as little time as possible to express their views both of Mr. White's and the board's management of the company's affairs. Unless, therefore, the board do so print and circulate Mr. White's report with his explanations added, I shall move an adjournment of the meeting to give time for consideration before adopting either Mr. White's report or his recommendations. Mr. White's reports have hitherto been so falsified by events that I decline any longer (as a great many other shareholders do) to repose a blind confidence either in Mr. White's or the board's recommendations.—*June 21.* THOS. BAXTER.

NEW QUEBRADA COMPANY.

SIR,—I observe from the official returns for April that there is a slight falling off in the output, but striking an average of the year's working there is nothing discouraging in this. I am anxious to know the results of the working in the Titiaro Mine, from which we were assured by so many experts that we might look forward to large and valuable supplies of rich grade ore. It seems to me to be most important to open upon the lode at this point, the railway company having agreed to extend their line to bring the ore from this branch, and seeing the heavy charges which we have to pay the only hope the shareholders have of increased dividends must necessarily be gauged by the extent of the available stoping ground. Time has proved beyond dispute that our ore is practically inexhaustible, and we only have to vigorously develope the various points in operation, and in spite of the rumours of alarmists; and even allowing that we are not able to effect a compromise with respect to the royalties, charges, or commissions, whichever they may be, I am satisfied that if our mines are properly worked they will yield good and continuous dividends.—*Gresham House, June 21.* N. N.

NEWS FROM BRAZIL.

SIR,—At the Morro Velho Mine the influx of water in the present mine is caused in great part by the drains round the old mine being neglected. With knowledge and proper care no such flooding should have taken place. The great depth of water in the sump is a most serious matter for the shareholders of the company, as the richest and most productive part of the mine is unable to work; we have now, therefore, got the old stock sentence again—"temporary admixture of killas"—introduced into the reports; a most convenient term to cover all sorts of shortcomings. I observe that the reserve fund has been attacked, and it is reported some 10,000*l.* has been sent over here. The Catta Branca blacks are being sent for from all parts where they are at work to Morro Velho, no doubt with the view of buying up the individual claims of these ill-used people against the St. John del Rey Company. The poor ignorant blacks will have a very small chance with the extremely keen employees of the company at Morro Velho. Fortunately for many of them they have already sold their claims, and the St. John del Rey Company will have to pay the full amount to which the individual blacks are entitled it was foreseen long ago that the officers of the St. John del Rey Company would endeavour to extricate themselves from the consequences of their treatment of these blacks by inducing them to sell their claims cheap. At the lowest computation on an average they are entitled to a sum of 500*l.* each for wages only. Then has to be calculated the interest and damages to be assessed for 20 years illegally in slavery, and for reducing them to slavery in 1872.

A pamphlet has been published in Rio de Janeiro, called Truth and Justice, on this Catta Branca question. It contains a letter from Mr. Ricketts, British Consul, declaring "that no (Brazilian) Catta Branca Company exists in London, and it is not known, and there is no legal representative," and the pamphlet goes on to show, in spite of the non-existence of this company, how documents were prepared pretending to emanate from it, and were presented as evidence before the Brazilian tribunals of justice. There needs no comment upon this mode of procedure. Of course, if Mr. Hockin cannot answer these remarks to his shareholders, they and the world will be at liberty to think what they like respecting his silence. At Cuiaba the company are not getting on very well, unfortunately for the third parties who are waiting to assert their rights of mortgage, and also the parties whose rights over this property were attempted to be jumped over by the St. John del Rey Company. The officers of this company appear to fancy they are so clever they can carry all before them, but they will find themselves as much mistaken when they have spent a sufficient sum of money at Cuiaba as they have been in their proceedings to deprive the Catta Branca blacks of their liberty and wages. At Raposas the French syndicate is proceeding with its work under the management of Mr. Dale.

At Pitangui it is necessary merely to suspend the works to allow the mine to drain naturally. At Carrego de Sao Miguel the works are temporarily stopped, and Capt. Eslick proceeds to England. At Don Pedro North del Rey the upper veins are being attacked, and some gold is the result; yet it is very doubtful if this mode of working will pay by hand labour, but if water could be brought over these upper veins and they were treated by the Californian hydraulic method, they are quite rich enough to give very good returns indeed. The ram sent out, even with the extra pumps, appears useless to drain the mine. The employees at the mine are not to be blamed, who are doing all they can with the limited means at their disposal. The fault lies with the incompetent London management. At Rica Grande the person in charge, Señor Borgess, is using the machinery to show how good his mine is, and hopes thus to sell "Gereza." In June a fresh destruction of the woods will again take place to plant mills, which pays hardly Señor Borgess' salary. The stores are becoming less daily, which cost the shareholders so many thousands of pounds sterling. ZELBRADO.

MODE OF PURCHASING ZINC ORES.

SIR,—The principles upon which copper, tin, and lead ores are purchased by the English smelters are pretty generally understood, so that when the copper or tin standard or the price of metallic lead is known the miner can readily estimate how much per ton he will receive for ore of a given quality, but with regard to zinc ores similar knowledge is certainly not generally possessed by outsiders, the natural consequence being that they have no means of judging whether an ore will pay for shipment or not, or whether it would be more advantageous to ship to England, or sell on the spot.

Although in the case of mixed ores of lead and blende, for example, there are, of course, other considerations than mere percentage of zinc which will have a bearing on the price. I presume that the allowance for the zinc is, anyhow, so much per unit, and a friend of mine at New York is anxious to ascertain what this allowance is. Now, I notice in the *Mining Journal* of June 10 that the Talargoch Mine sold two parcels of 252 and 30 tons respectively of blende to Messrs. P. Grenfell and Sons, and that they paid 4*l.* 2s. 6d. for the first parcel, and 1*l.* 15s. for the second. Will, therefore, either the buyers or sellers inform me, through the Journal, the produce of the ores of each parcel, and also whether any other metal that may be contained is allowed for (as in the case of silver with lead ore) when it happens to be mixed with the zinc. If there be any standard upon which zinc ores are sold, I should be very glad to learn what it is, and how it is calculated.—*June 20.* BLENDE.

NICKEL MINING IN ENGLAND OR WALES.

SIR,—Will you kindly allow me space in the Journal to ask if any one of its numerous readers can supply information as to the existence of a nickel mine now under work in either England or Wales, and what is the present market value of the metal? ENQUIRER.

LEAD REPORT.

SIR,—Since our last the market has been very steady, and a large business has been done on private terms. The last sales reported are as follows:—

150	tons	Rich Spanish	£14	15 0
180	„	Ordinary Spanish	14	12 6
250	„	Linares Spanish	14	5 0
75	„	Ordinary Spanish	14	12 6
180	„	Rich Spanish	14	15 0
100	„	Linares Spanish	14	5 0
100	„	Common Spanish	13	15 6

The market is firm with a tendency upwards, particularly for leads containing silver. Soft English leads are in poor demand and a fair quantity offering.—*Newcastle-on-Tyne, June 22.* STOCKS.

SORTRIDGE COPPER MINING COMPANY.

SIR,—I wish to call the attention of your readers, but more especially that of its shareholders, to the undoubted value of the above company. It is now only a twelvemonth since the company was formed, and the property examined by some of the ablest practical mining experts of the day, who spoke in unqualified terms of its richness and its future success. We all know of the difficulties Captain Skewis had to overcome, in the abundance of water, &c., but he is now on the eve of exploring the various lodes, and I have no doubt we shall shortly hear of some wonderful discoveries being made.

Glasgow, June 20. J. M. U.

SILVER VALLEY, GREAT WHEAL POLGOOTH, AND WHEAL ELIZABETH MINES.

SIR,—I should be glad if some of your readers would kindly inform me when the affairs of the above-named companies are to be settled up? Surely the shareholders have now waited long enough for a return of some sort of dividend out of the money they themselves subscribed; but it seems when such affairs as these get into some people's hands they are never satisfied unless they spend every shilling of the money in hand; but let us hope this is not the case, because it is rather hard to have to lose half of it without losing all. The man who brought these concerns before the public most of us know is undergoing imprisonment, and surely if they could prosecute him so quickly they could certainly have settled up all these affairs long before now.—*Wotton-under-Edge, June 21.* A. R.

VISIT TO LLANARMON.

SIR,—On Thursday, June 15, a party of the Liverpool Geological Society, accompanied by a number of ladies and gentlemen from that town, visited this locality and spent one of the most pleasant days, while occupied in studying a page of the voluminous history of our ancient sphere in that part of Nature's book named the carboniferous formation. G. H. Morton, F.G.S., F.R.S., C. Rickett, M.D., F.G.S., and G. Tate, Ph.D., F.C.S. were among the party. They arrived at Llanferes about 11.30 A.M. under the guidance of Capt. Wm. Wasley, here Mr. Morton assumed the command, and at once introduced us to scenes so often depicted to the society by that indefatigable and successful geologist, who has for the last 30 years been studying this particular formation.

Immediately after crossing the River Alyn the learned gentleman awakened in me early reminiscences of childhood—going into the country to gather flowers. Away they scampered here and there to the face of every exposed rock, returning now and again with a more or less imperfect fossil to know its name. I am sorry to say, however, that, with the exception of a fine coral from the bed of encrinites, overlying the upper grey limestone, a good spirifer, and the indication of bryoroans in a stone found near the Denbighshire mines, the collection was upon the whole of an inferior quality, most of the other fossils collected were of the productus family. After crossing the Alyn a little lower down than Llanferes, Mr. Morton conducted us past the Belgrave Mines adit levels up to the top of Pot-Hole Hill, where a scenery of surpassing beauty appeared before us. The white hillocks of the Westminster Mines as they reflected the varying rays of light brought to bear upon them owing to a cloud now and again interposing between them, and the sun did not form an unimportant part of the picture. And, indeed, in looking at the vast accumulation of washed gangue my thoughts wandered to the time when this was being placed there by the united efforts of some hundreds of my fellow beings; who were actuated and governed by the same passions as myself, but where are they to-day? Almost all dead! For a distance of about five miles we could see the River Alyn smiling as it glided along to pass us on its way to the sea. Through a gap in the opposite hills, upon which Foel. Faman stood unmistakably conspicuous as the brother of the hills, we could just get a peep at the beautiful Vale of Clwyd; while off in the far distance we could see the prominent outlines of the Arenig. And still further a range of mountains popping their heads into the sky as if purposely to prevent our seeing Snowdon. At our feet lay the quiet picturesque little villages of Erryrys, Llanarmon, and Llanferes. On one side was to be seen Rhosesmor with its dotted little white cots, Bagillt and Buckley with their high Babel chimneys, the Dee and Liverpool with a silvery streak representing the Mersey. On the other side we could see the Park Mines and Minera Limeworks, the whole length of the Vale of Llanarmon, and obtain a glimpse of the Vale of Maelor. After my friends had satisfied themselves to their hearts content with this prospect, and returned to have one long last draught of the Llanarmon manufactured atmospheric mixture, guaranteed to cure everybody, we took our course towards the Belgrave Mine, where we found the workmen busily dressing some ore for market; here the party were most hospitably accommodated and entertained by Capt. and Mrs. Roberts, and I take this opportunity of thanking them as well as Mr. Francis for his courtesy in showing the beautiful specimens of galena that abound in the office, some of which had just come in from fresh ground to the east. After leaving here we were led to a position facing the Foel. Faman, Foel. Vindig, Bryn Gwyn quarries, and a good range of the grits. I mention these places because they formed the subject of a very eloquent and interesting address from Mr. Morton at the time. Our next course was past the Swallows to Pant-y-Dynog, Maes-y-Safn; at this place the fossil bags were well filled, so that some time was spent in doing some very good work. The last halt was made between Maes-y-Safn and the Denbighshire Mines, where the fossil bags were again opened. From here the party went off in two's or three's, the last arriving at the Dolphin, Mold, shortly after 5 P.M., where fresh energy was imparted to some exhausted frames from off a table that in every respect sustained Mr. Croft's high reputation in these matters—I can well understand that here enquirers are satisfied to remain. After passing a vote of thanks to Mr. Morton for the very successful way in which he had conducted the party, they started for the train. Just half way to the station we were informed that the train was in, this occasioned a general rush. Everyone, however, succeeded in securing a seat, and this morning I received from one of the gentlemen the following:—"After an uneventful railway journey I arrived home yesterday, and have not experienced any evil consequences as the result of yesterday's arduous labours. In the hurry and excitement at the last moment I lost sight of you, and must, therefore, send my *au revoir* by post." By the same post Dr. Rickett sent me two of his pamphlets, read before the society, Remarks on the Country around Mekin, and the Carboniferous Limestone of Skipton; so I take it that he has also landed all right. Thus ended a most enjoyable day.

Laburnum Villa, June 17. A. EDE.

EARLY RECOLLECTIONS, AND RECENT EVENTS.

SIR,—Kindly afford me space for this short letter. I am very much pleased with "R. S.'s" letter in the Supplement to last week's Journal; it corroborates all I said relative to the family of the Williams's, and completely removes from the mind of everyone that the statement in his preceding letter respecting Mr. Michael Williams was made through any feeling of envy, but merely through mistake. "R. S." says that he wrote only what he heard; this is what I supposed; it is dangerous to speak merely from hearsay. I readily unite in opinion with others that a collection of the chief part of "R. S.'s" letters into a volume would make an instructive as well as a most interesting one. Such letters are far from being those which I censure.—*June 20.* JOHN LEAN.

REPORT FROM CORNWALL.

June 22.—Still no change of any moment to record in connection with western mining, and no immediate prospect of any. Indeed, what with home alarms and uncertainties, and what with foreign complications, the best that can now be hoped just at present is that prices shall remain where they are. It is quite on the cards, indeed, that the French failures in the tin trade may have sundry minor counterparts in England, and then we should have a fall in the standards instead of the long expected rise. But it would be idle to attach any particular importance to a change of that kind, which would really mean nothing so far as the prospects of the metal are concerned. Taking everything, however, into consideration, our forecast would rather be in favour of a delay of definite improvement until the latter end of July or middle of August, though all calculations of probabilities are liable to be upset almost at a moment's notice.

There is no difficulty, indeed, in finding ample proof that the general condition of the county is satisfactory, and that the mining interest may now fairly be regarded as sound. For one thing there is an extension of banking accommodation in progress in various localities, which would never have been entered upon if there was not business to be done. For another Redruth may fairly be taken as striking a keynote for the condition of mining localities generally, and Redruth now, instead of appearing "on the verge of ruin," as was said a few years since, has all the outward signs of such a state of prosperity as it never before enjoyed. Improvements, public and private, are being carried out in all directions, and there seems to be no lack of money for any good work. Most important of these in the present connection is the new Science Schools, the foundation stone of which will probably be laid in two or three weeks by Mr Richard Tangye.

Redruth, too, has taken the lead in the extensive efforts which are being made to render the Jubilee meeting of the Polytechnic Society worthy of the society of the county, and of its chief industry; and at a meeting held this week it has been decided to appoint special sub-committees in the different districts in the county corresponding with a central committee at Redruth. Mr. F. W. Michell has kindly undertaken the duties of special secretary at Redruth. There should not be a single industrial phase of the county left unrepresented, and that thoroughly; and it is very gratifying to find such an interest being aroused and manifested.

Our efforts to obtain any satisfactory information with regard to the present state of affairs at South Caradon have not been rewarded with much success. The adventurers appear to be treated not only most illiberally, but with scant courtesy, if all is true. One of the rumours which we have heard is of a very extraordinary nature—that at the bottom of the difficulties in the way of a settlement there are some points "not altogether unconnected" with the last election for the division. The suggestion is so extraordinary a one that it hardly seems possible to be true, but it is not without some incidental support. If in addition to their customary difficulties with "lordly" ideas adventurers are to find themselves in the position of tenants who are expected to vote for "squire" mining will come to a pretty pass. Anyway in this instance it is as well to have the point stated and settled, if it can be one way or the other. If the rumour is false, as we hope it is, let it be authoritatively contradicted; if true, well then we shall better be able to estimate what the chances of South Caradon are.

Carn Brea has come before the magistrates for a breach of the Factory Acts, Capt. W. Teague being summoned by Mr. Buller before the Camborne Bench for employing a lad named John Bastian without first having a school certificate, and also with having employed Bastain before and after the dinner-hour, the same being unlawful hours. Capt. Teague pleaded guilty, and said the boy was engaged by a sub-agent, and on the Inspector informing him that the boy was illegally employed he at once dismissed him. When the boy came to see for work he said he had passed the fourth standard. Mr. Buller stated that on visiting the mine on May 19 he saw three boys running away. He followed them, and overtook Bastain, who said he was 14 years of age, but on getting the certificate of his age witness found he was only 12 years old. He reported the case to the Home Office, and also said at the same time that Capt. Teague had dismissed the lad from his employ. The Chairman said it was the duty of all mine agents to see that the children in their employ attended school, according to the Act, and he hoped this case would prove a warning to them all. A fine of 10s. and 9s. costs was imposed in the first case, and 15s. and 12s. 6d. costs in the second. The working of these Acts is not the easiest matter in the world, especially in mining districts.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

June 22.—The demand for furnace coal maintains a very uniform character at the present time from week to week, for the number of furnaces blowing shows scarcely any alteration. The sale of forge coal, however, fluctuates more frequently, and just now it is rather on the increase. Steam coal is being mined in large quantities on Cannock Chase, but the prices realised were never lower. House coal is practically a drug on the market, as is generally the case at this time of the year. Prices of such fuel are—best deep sorts 7s. to 8s. 6d., and shallow 6s. 6d. to 8s. at the pits, long weight. Steam coal is 5s. to 5s. 6d. at the pits, with, however, only 20 cwts. to the ton. Forge coal is 5s. 6d. to 6s. 6d. at the pits, long weight. The comparative quietude noticeable in the pig market last week, resulting from buyers having previously well bought forward, was this week again observable on 'Change in Wolverhampton and Birmingham. But prices of foreign part mine sorts were strong at 47s. 6d. to 48s. per ton. Thorncliffe (South Yorkshire) pigs were 60s., and Wellingborough (Derbyshire) pigs were quoted 52s. 6d., but with out business. Native three-part mine pigs were 57s. 6d. Manufactured iron was without alteration. Tin-plates are in fair demand, at about 19s. for charcoals delivered at Liverpool, and 16s. to 17s. for cokes. The quarterly meetings are fixed for July 12 and 13 in Wolverhampton and Birmingham respectively.

An important arrangement has been come to between masters and men in the Cannock Chase district. After much discontent and irresolution, a wages scale, submitted by the masters, has been accepted by the men, and it may now be expected that for a time at least things will go on more smoothly. The new scale is based on the average selling price of coal in the district. The minimum wage is to be 2s. 4½d. per stint, and rises, *pari passu*, with the rise in price up to a maximum of 2s. 10½d. a stint. Whenever it reaches the maximum coal will be selling at 7s. 9d., and then fresh negociations will be opened. The agreement is to continue in force for a year, and is then to be terminable on either side by six months notice.

The systems of underground haulage in use in the North Staffordshire coal field, as contrasted with those in the northern and Nottinghamshire fields formed a fruitful subject for consideration at a

meeting of the North Staffordshire Mining Institute on Monday at Stoke-on-Trent. The matter was introduced in a paper by the secretary (Mr. P. R. Haines), suggesting such modifications in the present endless chain and tail-rope systems, as might be used with advantage when the rise coals were exhausted, and the area to be worked lay to the deep of the pit. In the old South Staffordshire coal fields the presence of faults, he said, rendered underground haulage difficult, but the North Staffordshire field was more free from faults, the seams nearly all reposing at angles of from 10° to 45°.

It is understood that an effort will shortly be made to recover the bodies of the nine persons at present entombed in the Stratford Pit of the Baddesley Colliery Company. The fund for the relief of the sufferers from the explosion exceeds 5000*l.*, and contributions are still being received. There are 19 widows and 45 children dependent upon the fund for support, and grants are being made at the rate of 5s. a week for each widow, and 2s. 6d. for each child; but in no case has more than 15s. been granted to one family. The injured persons are being dealt with in a similar manner, 5s. per week being given to an adult and half-a-crown to each child.

A novel case under the Coal Mines Regulation Act came before the Stipendiary at Longton. Application was made for the removal of a check-weighman at the Turnhurst Colliery, Tunstall, on the ground of his having incited the men to refuse to work, owing to a quarrel he had had with a butty. The defence was that the men were not influenced by the defendant, but the Bench made an order for his removal.

STEEL FROM STAFFORDSHIRE PIG.—"Iron" (Walsall) writes to the editor of the Daily Post:—"Referring to the favourable report given in your paper, and the remarks thereon, as well as the letter on the same subject by Mr. Hingley on the manufacture of steel from Staffordshire pig-iron by the basic Bessemer process, as adapted by Thomas and Gilchrist, permit me to offer a few remarks on the matter as it presents itself to my mind. I quite agree with your cautioning manufacturers against being led away by statements made by inventors; nevertheless I believe it is quite within the range of practical development that steel can be produced by the method referred to as well as by others, at a cost even within that quoted by the inventors, and from common or ordinary pig-iron. Particularly would this be so where the iron was taken direct from the blast furnace to the converter; the costly process of puddling and shingling with the apparatus connected therewith, being dispensed with. The Thomas and Gilchrist method is in full and successful operation in many places, and their statements of cost, I think, may be taken as tolerably accurate, being derived from practical results. The wonder is that the Staffordshire people have been so slow in trying the method. One thing however, is certain; the days of puddling are numbered. There may be, however, other and equally trustworthy methods of effecting like results, at the same time obviating the extraordinarily expensive plant required for the Bessemer system, and this, perhaps, may to some extent account for the caution shown in the matter by many manufacturers who have already sunk a large capital in material and plant, and cannot well afford to at once replace it by other machinery of a still more expensive nature. But if a method can be devised whereby the present plant may be rearranged cheaply to effect similar results—and there is nothing impracticable in this—there is nothing to prevent every ironmaster rapidly becoming a maker of steel. I am quite satisfied from the results I have seen that this is far from being impossible, and that an ordinary furnace in the possession of every iron manufacturer may be altered at a trifling cost to produce steel or iron ingots at a rate exually satisfactory, besides the advantage of producing the different qualities required for specific purposes."

TRADE OF THE TYNE AND WEAR.

June 21.—There is not much new to report in connection with the coal and coke trades, on the whole the works on these rivers are fairly well employed. The steam coalworks are on the whole fully employed, and the increased demand for steam small and manufacturing coal is a very favourable feature in the trade, as it enables the colliery owners to utilise all the coal sent from the mine; formerly a considerable quantity of the small resulting from screening was wasted or burnt, at present there is a fair market for all descriptions. The gas coal shipments have fallen off to some extent, but as stocks are held of this coal this does not prevent the works in Durham being kept fairly going. The house coal trade is very quiet, and this will continue until the autumn trade sets in. There is no change in the state of the coke trade of consequence, and prices are well maintained.

An action for compensation under the Employers' Liability Act was brought in the Newcastle County Court a few days ago by the widow of a miner killed at the Elswick Colliery. Jas. Wilson White, a coal hewer, was killed by a fall of stone on Nov. 16, she claiming 280*l.* as an equivalent for three years' earnings. The seam in which the man worked had a grey metal roof. It was contended that the place he worked in was not sufficiently timbered, and also that there was not a supply of props near the place where he worked. Witnesses were called, but the evidence was conflicting, some of them stating that the place was properly timbered, and some the contrary. One fact, however, given was fatal to the case of the plaintiff. Wm. Cranston, a miner, who was working with the deceased, stated that when they commenced working they put a prop under the stone but afterwards removed this prop, and a large stone fell and killed the deceased. The jury returned a verdict for the defendant.

We alluded last week to the failure of the owners of the Castle Eden and Whitworth Collieries and the Moor Ironworks, Stockton; the case has attracted much attention in the district owing to the fact that the bankers have taken possession of all those works, while the general creditors unsecured are likely to lose the entire value of their claims or nearly so, as the assets are not expected to afford more than 2d. in 1*l.* for those unfortunate persons. It appears that this is effected by means of a mortgage their banker secured on those valuable premises, the mortgage containing what is called an attornment clause. Under the arrangement the borrower of the money on his mines or works really becomes the tenant of the banker who lends the money, and if he fails to pay the interest the latter can then bring the law of distress into play, and seize the whole effects, and shut out all the unsecured creditors. This case appears to point most clearly to the necessity for a public registration of such mortgages in this county, in order to give tradesmen and others a chance of knowing the real position of the parties they are supplying with valuable goods.

The tone of the iron market has improved considerably during the week, mainly caused by the advance in the price of iron at Glasgow. Considerable sales have been made by makers at 43s. 6d. No. 3, and this with increased confidence. The shipments of pig-iron have been 14,780 tons during the week. Messrs. Connals stocks show a large decline, and the stock now held is 127,911 tons. The manufactured iron trade has been very firm, especially ship-plates. There is an active trade doing in steel rails. The iron shipbuilding trade continues very active on these rivers, and marine engine builders and boiler builders, &c., are consequently very actively engaged also. A very fine mail steamer was launched from the Jarrow Yard on Saturday, built for the General Steam Navigation Company of Italy. This ship, the Raffaele Rubitteno, is one of the most handsome and beautifully-finished specimens of marine architecture ever turned out of a ship-yard. The dimensions of the vessel are—length, 412 ft. by 44 ft. by 31 ft. 3 in. It has a carrying capacity of 4500 tons deadweight. The engines are 500-horse power nominal; the cylinders being 54 in. and 96 in., and the length of the stroke 60 in. The vessel is especially designed and constructed for the mail service between Genoa and Bombay, and will have accommodation for 100 first-class passengers and 50 second-class. This fine vessel will no doubt increase the fame of this celebrated iron-shipbuilding firm.

It is interesting to note the improvements that have been effected in marine engines during the past 20 years; the great cost of steam coal for working these engines has led to great improvements and consequent economy in the use of fuel. On the Tyne a vessel built 18 years ago of, say, 3000 tons burthen, consumes 24 tons of coal daily, but a modern built vessel, when the engines put into her include all the latest improvements, surface condensing, high and low pressure cylinders, &c., of 3200 tons dead weight capacity, consumes only 9 tons of coal per day. These figures show clearly the great improvements that have been effected in the construction of marine engines, and, of course, this aids most materially to make steamers remunerative.

The lead trade has improved to a certain extent here lately, and it is stated by a leading London newspaper that an envoy has been sent to confer with the British Government on the duties levied on Spanish lead exported and the duties on Spanish wines imported into this country. It is, therefore, hoped that some arrangement will be made to relieve the importers of lead here from the duties which at present interfere with this important trade. There is again disturbance among the Weardale lead miners. Crowded meetings have been held at St. John's Chapel, and resolution passed to take no more "bargains" at the W. B. Lead Mines under the present agents and the new systems, it being the wish of the miners to re-establish the old system of monthly advances of subsistence money. The men are not, however, unanimous, some of them wishing to continue on the present system, but unless events take an unexpected turn it appears to be probable that the bulk of the miners will strike at the end of the present month. The number of men is stated to be about 200.

A meeting of the members of the Arbitration Board in connection with the North of England iron trade was held at Darlington on Monday. Mr. Whitwall, President, occupied the chair. The Chairman addressed the board, and he, of course, severely censured the men who brought about the late strike. The men, he remarked, who took that course acted unfairly in every respect that set at defiance the decision of the arbitrator, and they also broke with their own representatives. But the main object of the meeting was to ascertain or determine what course the board was to pursue in the future, whether to continue or to disband, and allow the trade to fall back into its original position. Twenty-one works were represented, and the delegates gave their opinions on these important questions. Mr. Trow, the operative secretary, said that he doubted that the men there represented the workmen, as they had all been repudiated at the time of the strike except three. After some discussion it was decided to submit the following questions to the men, to be decided by ballot on Saturday next:—1. Are you in favour of continuing the Board of Arbitrators.—2. Do you promise to abide loyally by its decision?

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

June 22.—What has become of our lead mining friends between Llandegla, Llanarmon, and Mold, Lead Era, Lady Ann, "Enquirer," &c., we hear so little of and from them? We also sorely miss our old friend, Captain Robert Knapp, from the Llanrwst district. It is a real pleasure to see he has not forgotten us in his new and distant home, where we wish him success. "Jno. B.," of Wakefield, writing in last week's Journal, has certainly the advantage over Capt. Absalom Francis in his proposal to stop the production of ore from non-paying mines rather than from profitable mines, as advocated by the letter. Still, it is a question whether "Jno. B.'s" plan is compatible with that development of progressive mines by which alone they can hope to rank among the dividend mines. The lack of the spirit of enterprise in home mineral industries is evidenced by the number of very valuable slate quarries in Wales and elsewhere that are now going a begging. This is, perhaps, partly owing to the not over brisk condition of the slate trade, and in part, also, to the lack of scope for speculation which such properties have in comparison with foreign problematical gold mines. Mr. Fraser was quite right in his remarks in the Journal the other week as to the neglect of lead and other mines in Wales from the same causes. In most foreign enterprises "distance lends enchantment to the view"—at least, for a time. Although the colliers have resumed work they are still in a rather quarrelsome mood, and there is a dispute going on at the Plaskynaston Colliery owing to the removal or a check-weigher. The brick, tile, and pipe works are fairly employed, but the prices for brick, especially the commoner sorts, rule low. The taste for bright red tiles for roofing which has of late revived has given an impetus to the works using red clays. If the distinguished character of the witnesses in its favour will have weight with the Lords' Committee the Wrexham, Mold, and Connah's Quay Railway Port Bill is safe to pass. The Duke of Westminster, Mr. Gladstone, and the leading landowners and mineowners, have given their testimony in its favour. In truth, the opinion of the whole district as to the value of the proposed works is all but unanimous. The oil, chemical, and smelting works along the estuary of the Dee seem well employed. The shipping and shipbuilding trades have improved; a large iron vessel was brought to Carnarvon Quay last Thursday to have her engines, made by the Messrs. De Winton and Co., placed in her. There has been the usual chapter of accidents. A disastrous fire at the Britannia Foundry, Port Madoc. A man suffocated and burnt to death on a lime kiln at Porthywaer. A locomotive steam crane smashed to fragments on the Pipe line of the Liverpool Corporation Water-works near Llanrhonadr, with a number of minor accidents.

TRADE IN SOUTH WALES.

June 22.—The steam coal trade keeps remarkably active, and prices are hardening: good colliery double-screened stand at 11s. The dispute betweeen the steam coal and house coal men, owing to the former having made arrangements with respect to the sliding scale in the absence of the representatives of the latter, will probably come to nothing, as the scale is manifestly in favour of the men, who obtain an immediate rise of 5 per cent. under it. The amount sent away from Cardiff last week was 111,218 tons: Newport—24,781 foreign, and 19,858 coastwise; Swansea—16,591 foreign, and 8923 coastwise. The Prince of Wales's Dock at the latter port is not yet open for shipping, owing to the railway authorities having not yet completed their arrangements. Of patent fuel there has been sent away from Cardiff 6389 tons, and from Swansea 4795 tons. The freight market is slack. Pitwood has arrived at Cardiff to the extent of 1778 tons.

The Cyfarthfa Ironworks made a start on Monday, with the view of converting their works for the make of steel rails. A few men were put on with ingots obtained from elsewhere. At the end of last week orders were given for the unroofing of the Pandy Mill, and the pulling down of such portions of the building as will not be required for the new structure. That work has already been commenced, and there is no doubt that this and all other portions of the reconstruction will be pushed on with as great vigour and rapidity as possible. The old furnaces, it appears, will not be again used, and as the "old dog" will not be worth the cost of removal, they will be filled up and used as a kind of platform or bank from which the three new furnaces to be built will, it is stated, be upon the latest and most approved principles; they will be similar to the new ones in use at Dowlais, and will be 70 ft. high. There will be two converters, and every other appliance for the carrying on of an extensive steelworks. The amount of iron shipped from Cardiff last week was 6960, and some parcels were sent away from Newport, consisting of 850 tons to Fiume, 450 to Gijon, and 223 to Ensenada. The trade, on the whole, is somewhat better. The Rhymney Ironworks have earned 20,457*l.* during the last year, but the directors have resolved not to declare a dividend for the last six months. Iron ore is coming in smaller quantities. From Bilbao 5178 tons have arrived at Cardiff, and 1478 from other places. Newport—6552 tons from Bilbao, and 4860 from other places. The price may be quoted at 15s. 6d. per ton, with a weak market.

The tin-plate trade, although constantly expanding, is inactive at present. In the first five months of 1880 there were sent away from this country 85,744 tons; 1881, 94,160 tons; and 1882, 102,060 tons. The price of good coke-made at Liverpool is 15s. 9d. to 16s. per box. The Rhiwderin Works will probably pay a dividend of 6s. 8d. in 1*l.*

The colliery managers from the lower Rhondda district met at Llwynpia on Tuesday to experiment upon safety-lamps in the building lately occupied by the Royal Commissioners of Mines. Last Monday, it will be remembered, the managers from the upper district were present here for the same purpose. It was felt by many of them that such an opportunity of investigating the different behaviour of the various kind of lamps, when exposed to gas under varied conditions of velocity and mixture, should not be lost. The idea of benefiting by the opportunity resulting from the Royal Commissioners' visit was a happy conceived one, as affording to those gentlemen in the district connected with mining experiences and instruction of great worth. All present seemed deeply interested in the routine, and expressed great pleasure at the result of the meeting. A large number of gentlemen, colliery managers, &c., were present. At the completion of the tests they returned to the Ivor Hall, where luncheon had been prepared.

An important case to colliers was brought by Mr. Hedley, her Majesty,s Inspector of Mines, against the owner and manager of Hazlewood Collieries. Defendants were charged with four offences, each under the Mines Regulation Act. It appeared that there had been no examination of the workings made, no inspection of machinery, and no abstract of the rules posted up. The defendants were fined 18*l.* 18s., including costs.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

June 22.—Lead mining does not appear to be by any means a profitable business in some parts of Derbyshire, judging by the report of one company that has just been issued showing a loss of more than 1100*l.* on the year's working, the ore sold having realised only 201*l.* But companies, it may be said, do not always get on so well as private individuals, in the carrying on of mining concerns in particular. In some cases the expenditure in the first instance is kept down injudiciously, for there can be no greater mistake than in neglecting to take advantage of the newest and best machinery and appliances. Still at the place we have alluded to the plant is said to be all that could be desired; yet there is a serious loss to the shareholders, which, under the circumstances, is most disheartening. A moderate quantity of ironstone is being raised; but ironmasters are paying less and less attention to their local supplies, preferring the ores of Northampton and Rutland to those of the coal measures which have certain qualities not contained in the other, having, for instance, more silica, which is an advantage in the furnace. There is still a large output of iron at the Stavely, Sheepbridge, Stanton, and other works, with a steady outside demand, whilst stocks are by no means heavy when taken all round.

At the mills business is still of a somewhat moderate character, but the foundries as a rule are doing rather better. The works at Dronfield continue active, and there are at present no indications of their removal, which has been decided upon, and which will be severely felt in the place, while the works have caused a great increase in the population as well as in buildings and improvements, the latter of which will fall heavily in the future on those who are left, as the payments for them were extended over a number of years. In the same locality, too, there has not been so much doing in coal, although Unstone at one time gave great promise of turning out a by no means insignificant centre, but last month there were only sent from it about 3000 tons to the London market, to which a great deal more was much earlier on. Clay Cross still maintains its position, sending more coal to the Metropolis than any other place in the kingdom, and it is closely followed by Eckington and Grassmoor. In the adjoining county, Nottinghamshire, several collieries have been doing tolerably well of late as regards London, having the advantage of being so much nearer to that important market than many other districts where the same seams of coal are being worked. The greater part of the coal sent to London, it may be said, is for household purposes, and there is still some difficulty in disposing of the hard or steam qualities. It remains to be seen whether the new dock and improved shipping facilities now being made at Boston will be taken advantage of by the colliery owners in the southern portion of the Great Midland coal field.

The trade of Sheffield continues in a healthy state, and few complaints are heard as to slackness. At the leading works, such as Brown's and Cammell's, the mills are working well, especially in the composite plates, which are now being turned out for several Governments as well as our own. In ship-plates there is also a good business doing for several distant places, whilst sheet, angle, and bar iron is also in good request. This is the busy time for sheepshears, and makers have now plenty to do. Makers of most qualities of steel have now a better demand for various qualities, and this refers to both Bessemer and crucible steel, and some special qualities of the former are being produced for cutlery as well as for other purposes. But the great run is still for rails, which continue in brisk request, the prices still being low, and leaving but a small margin of profit. The cutlery houses have been doing well in both best and secondary qualities of table and pocket knives, whilst the demand on American account has rather improved of late. Cast-steel goods, including wheels, axles, picks, and hammers, have gone off well of late. Some of the foundries have become busier, as have the engine and machine works.

No change has taken place in the coal trade, which is now at a low ebb, as the colliery owners say they are working without profit, and this the men seem to understand, for low as are their wages they are evidently satisfied that nothing is to be obtained by agitation. Steam coal, however, has been going off well from several collieries for shipment from both Hull and Grimsby, but prices have not improved.

MINERALOGICAL MAGAZINE.—The new number of this magazine—that for May—contains the excerpt Minutes of Council meeting held at York, on Sept. 2; of the sixth annual general meeting of the society held at the same time and place; and of subsequent meetings up to March 23 of the present year. The accounts for the year 1881 show that the concern is a fairly good financial condition, and very cheaply managed—the secretaryship and office expenses, including 7s. 6d. expenses incidental to meetings, cost but 7*l.* 4s. for the year, at the end of which the assets exceeded the liabilities by the sum of 111*l.* 14s. 4d. The present number contains two valuable papers by Prof. Heddle—the one on minerals new to Britain, the other on some ill-determined minerals; an interesting paper on a peculiar copper ore from Coombing Copper Mine, Carcoar, New South Wales, by Prof. A. Liversidge, of the University of Sydney; and others on the occurrence of linarite in slag, by Mr. P. Dudgeon, of Cargen, Dumfries; on some artificial forms of silica, illustrative of structure of agates, chalcedonies, &c., by Messrs. J. T'Anson and E. A. Pankhurst; and notes on artificial crystals of specular iron formed in a copper works slag, by Mr. W. Terrill. There is an excellent description of the Geological Map of Sutherland, by Prof. Heddle, and the title and index to Vol. IV., and two sheets to substitute for certain pages inaccurately printed in Part 20. The lithographs accompanying the volume are really beautiful works of art

HISTORY AND PROGRESS OF INVENTION.—The utility of the Abridgments of Specifications prepared and printed by H.M. Commissioners of Patents has frequently been pointed out in the *Mining Journal*, and not a few of the public have long ere this learned by dearly bought experience that it would have been well to adopt the Commissioners' strong recommendation that inventors before applying for letters patent should consult the classes of Abridgments of Specifications which relate to the subjects of their inventions, and by the aid of these works to select the specifications they may consider it necessary to examine in order to ascertain if their inventions be new. Amongst the more recently issued of these volumes are those relating to Air, Gas, and other Motive Power Engines invented between 1867 and 1876; to Brewing, Wine-making, and Distilling Alcholic Liquids, 1634 to 1866; to Metallic Pipes and Tubes, 1867 to 1876; and to inventions between the same dates relating to Music and Musical Instruments; to Writing Instruments and Materials; to Cutting, Folding, and Ornamenting Paper; and to Cooking, Bread making, and the Preparation of Confectionery—each series costing from 1s. to 3s. 6d., exclusive of postage. There have also been issued the several series relating to Letterpress and similar Printing (excluding electrotelegraphic and photographic printing) from 1867 to 1876, and to the inventions specified during the same period in connection with Dressing and Finishing Woven Fabrics and Manufacturing Felted Fabrics (including folding, winding, measuring, and packing); and to Umbrellas, Parasols, and Walking-sticks. The

price of the series varies from 1s. to 2s. 3d. Each of these volumes will be useful to a large class of readers although they are not immediately connected with the development of mines. But inventors engaged in mining and metallurgical industry are by no means neglected, although from the greater rapidity of inventive development among them, the prices of the series are usually somewhat higher; thus, the second parts of the Abridgments relating to the Manufacture of Iron and Steel, extending from 1867 to 1876, forms a volume of 1245 pages, weighing over 2 lbs., and therefore, although sold, as usual, at cost price, the charge is 4s. 6d. without postage. Two other of the latest issued series are those relating to inventions connected with Electricity and Magnetism, comprising Division I., extending from 1867 to 1876, and embracing the Generation of Electricity and Magnetism; and Division V., extending from 1805 to 1876, and embracing Electro-deposition and Electrolysis. The intermediate divisions are in course of preparation, and all form a continuation of Vol. 15 issued some years since, when electrical inventions were less numerous than at present. The preferable course for those interested in either of the subjects mentioned will be to send address and postage-stamp to the Officer in Charge, Commissioners of Patents' Sale Department, Cursitor-street, Chancery-lane, with the request that he will send the list of works published. The volumes will be further noticed as opportunity offers.

Meetings of Public Companies.

THE DRAKEWALLS UNITED TIN AND COPPER MINING COMPANY (LIMITED)

The first ordinary annual general meeting of shareholders was held at the offices of the company, 18, Austin Friars, on Monday,

The Right Hon. Lord CLAUD HAMILTON presiding.

The SECRETARY read the notice calling the meeting; the report and accounts were taken as read.

The CHAIRMAN said he proposed to make a few remarks before moving the adoption of the report. This was the first meeting of the company which had been held since the statutory meeting, and the directors had to report upon what had been done in the course of the last 14 months. In his report Mr. Bawden had given a very lengthy statement of what had been going on. The shareholders were aware that when this great property was purchased by the present company it was in a state of great disrepair. It had been flooded for nearly six years, and the woodwork was naturally very rotten, and many shafts had caved in, and there was an immense amount of work to be done to put it in a position in which remunerative operations could be renewed. A great mass of water had also accumulated, and in order to get rid of that an adit had to be driven so as to run the water off down to the river Tamar. This was an operation which cost a great deal of money, and had to be done with great skill, especially when they approached where the water was, and there were 80 fms. in depth of water, and if this had been suddenly let into the adit it would have caused loss of life. This work had, however, been carried out without loss of life, and that work was completed. The next great operation was to get to the other portion of the mine. The mine as they were aware, had been worked for centuries, and had been abandoned and taken up again. During the past 14 months 209 fms. had been driven. The shafts were in a very dilapidated state owing to the water being in them, and they had to be timbered, which was a process which took a considerable time and involved considerable expense. They were now in perfectly safe order, and when they had completed another 140 fms., which would take six or seven months, they would have the whole of the southern branches open and the water would all be carried away except in one place, where there would be pumping for 30 fms. Then the whole mine would be open for operations, and the securing of the tinstuff. They had had certain returns from tribute men who had been put on here and there on a small scale, the results of whose labours had been most satisfactory, and the tribute men themselves had been exceedingly satisfied with the results of their labour in the mine, and this gave a favourable omen for the future. At the same time they could not take up every workman who offered himself as a tributer; they must have good men, and men whom they could trust, and owing to considerable emigration from that part of the country first-class labour was rather difficult to get. It was satisfactory to know that the company stood high amongst the employers of labour in the district, and the men came willingly. When the underground work was finished they would be able to set to work in the south branches. The whole of the extensive machinery had been put in perfect working order. Some of it required a considerable amount of expenditure. They had the 56 stamps which were worked by steam, and were working during the day; there was not, at present, sufficient tinstuff to keep them going during the night. There were also 44 stamps worked by water-power; and when there was sufficient ore for the operation the other stamps and plant would be put in proper working order. There was a very clever operation performed—the re-boring of the cylinder of the steam-engine—which was done without taking it from the premises, and thus a saving of about 100*l.* was effected. The operation was performed with skill and success. They had put the dressing floors in perfect order, and also built a new tin storehouse, which would hold 50 or 100 tons of tin, when it was ready to be put in. The last paragraph in the report might not altogether come up to what the shareholders might expect—that during the next three months they expected to get about 7 tons of tin per month. No doubt many would consider that an indequate return, considering the time the mine had been in operation; but they must bear in mind that there was the necessity for finishing the dead work, which, of course, prevented them from getting out so much tin ore as they otherwise would have done. Mr. Bawden went upon the plan of minimising, and not exaggerating. As the dead works were completed the montly expenses would somewhat diminish; therefore, if they get the 7 tons per month for the next three months it would pay the working expenses. As regarded the figures, he should be happy to afford the fullest information to every shareholder. All the preliminary expenses had been paid (though in many companies it was usual to extend these over a series of years), and the company had no debt whatever. (Hear, hear.) Therefore, the shareholders knew the exact position of the company. He might mention that 14 months accounts had been charged, as the shareholders would have seen from the balance-sheet. He moved the adoption of the Chairman and directors' reports, and also of the balance-sheet and statement of receipts and expenditure.

Mr. WILSON seconded the motion, and congratulated the company on the prospects.

A SHAREHOLDER thought the amount for advertising in London and Glasgow was large, as also the amount for brokerage.

A SHAREHOLDER expressed his concurrence with the above view. He went on to say he was pleased to see so much money had been spent in bringing the mine forward to a paying condition. He did not, however, quite see how 7 tons of tin per month would quite pay the monthly cost; the average price of tin was about 60*l.*, which would yield 420*l.*, and he believed the monthly expenses were about 500*l.*

MR. PETER WATSON (London manager) said the object of starting the company was to accomplish what had previously been carried on the driving of the tunnel level, which had been commenced a century ago by a previous company, and continued by others, which had developed the property to a certain extent, and had left off simply because they could not proceed for want of appliances and ventilation. It was stated that the object of the company was to unwater the mine. It was also stated at the statutory meeting in August last that in the course of about two months that would be accomplished. Nothing more could be done, nothing more was being done, but simply to unwater the mine, and put the shaft in order. The old timber had to be taken out, and new timber put in. That was safely accomplished in October. Since then the water was drained out of the adit level, and operations had been carried out, and a very large section of tin ground had been opened up, which would come to the benefit of the shareholders. If they had stoped the tinstuff away, as they might have done, they would have had a different state of things, but they had opened that tin ground and left it in reserve, to be taken away by the tributers at a profit to the shareholders. With regard to the expense of advertising, he did not wonder some of the shareholders considered it a large amount; it was a large amount, but this company was launched at a time when a great many other companies were being launched, and they were at the mercy of the press with regard to what they liked to charge for advertising. The prospectus was a very long one, and when they advertised it, as they did, in the leading papers the account mounted up. However, that was the amount, and the company had had to pay it. As regarded the brokerage that was an amount paid to various persons for obtaining applications for shares in Glasgow and London. Having referred to and explained two or three other items in the accounts, he went on to say the shareholders must bear in mind that this was a 14 months' account. Everything had been charged up. He had asked Mr. Bawden to-day whether there was any liability at the mine, and he stated there was nothing but the ordinary current costs. The object of the company had been to unwater the mine. He remembered 30 years ago when this mine returned 20 to 25 tons per month, at prices of 30*l.*, 35*l.*, and 40*l.* per ton, and he hoped that they would again get up to 30 or 35 tons of tin per month, and then the shareholders might expect good profits and good dividends. (Hear, hear.) In mining they could not do just as they wished; it always took time, and it would take time in this mine. They had not yet come to the best part of the mine yet, because the best part was to the west of Brenton's shaft, which was always considered the best. There were rich branches of tin there, and when they approached that portion of the mine they would have a large section of tin ground open. In a comparatively short time he hoped to see the water out so that the driving of the bottom levels could be proceeded with, and he believed that, in all probability, it was there they would find rich branches, much beyond their calculations. But he thought they would have to put in more rock-drills, and open up the mine more rapidly, and if they could get the large number of men he hoped to get, they would be able to considerably increase the returns before they met again. (Cheers.)

The resolution for the adoption of the report and accounts was then put and carried.

Mr. MOSES BAWDEN said that, speaking not only as manager and purser, but also as a shareholder, he held a large number of shares—over 1000, and he had no intention of parting with them just yet. As the Chairman had said they had done a certain amount of work during the last 14 months. A shareholder had remarked that the cost was about 500*l.* a month, but it was really only about 400*l.* a month, and if they sold 7 tons per month at 60*l.* per ton they would meet the expense supposing they were as large as during the past 14 months. During that time they had done a certain amount of dead work. When the company acquired the property they drove 55 fms. on the cross-cut, so as to cut the great chasm in the mine, which had been worked 80 fms. deep. In places the chasm was 60 ft. wide 12 or 14 years ago, and it was found there were several branches standing throughout the mine to the south of this large chasm, but there was a piece of ground which was unprofitable, and which was proved to be 16 ft. wide. The object had been to unwater the mine so that the water should run off to the River Tamar instead of being pumped up to the surface. For 20 years the companies who worked the property had never seen the bottom of the shaft, for they never could drain off the water, and were not in a position to erect better machinery. When the water was down to the 30 fm. level a 6 ft. lift would drain the mine. In driving the 154 fm. they were driving on the south branches, but were unable to return a single pound weight of tin, as they had no communication with the shaft. They had now communication with two shafts, and would be able to put men to work on those branches, and thus increase the returns. He had put 7 tons per month as the lowest he ought to do, and when he said he hoped they would do better he had no doubt they would do better. (Hear, hear.) He knew no reason why they should not bring up the returns as high as those of any other mine, and they could do it at 10*l.* per ton less. Their object must still be to bore to Brenton's shaft, but this was not dead work, but it was driving on the lode, and should they make any discovery at any point they could avail themselves of it. The steam engine had been put in thorough order. The stamps were in order and were working during the day time, and as they increased the number of men they would keep the stamps working during the night as well as the day. The dead work they had had to do in repairing the shaft had been very great. This shaft was found full of stuff for 30 fms., but it was now in as good a state of repair as it could be put in. He believed they had a very fine property which would yield very handsome returns of tin.

A SHAREHOLDER: How many men could you employ?—Mr. BAWDEN: About 100, and as they present themselves they will be employed. I have no doubt before we meet again at the end of another 12 months we shall have from 200 to 300 men employed at Drakewalls breaking tin. I think the results from the upper levels have been very good. The sales had reduced the cost of dead work to about 21*l.* a month. I should like that a competent miner be sent to the mine to make a report of what has been done and what should be done in future. He will say whether he concurs in our plan of operation, or what is to be done, and what is proposed to be done. I should be prepared to stand or fall by the report of any mining engineer who may be sent there. (Hear, hear.)

Mr. LECK said he wished to reduce the number of directors to three, and to pay them at a nominal rate for attendance. He contended that this was a small affair; that the expenditure was out of all proportion.

Mr. H. WILSON: Services cheaply rendered are seldom rendered well.

Major-General C. S. CATTY and Mr. CHARLES CATTY concurred in the observations as to the expenditure.

The CHAIRMAN said he was advised by the solicitor that the motion could not be legally put as to a reduction of directors.

The SOLICITOR said that if the shareholders wished to reduce the number of directors to three they could refuse to vote for the two gentlemen who were up for re-election to-day.

Mr. SMITH proposed the re-election of Lord Claud Hamilton and Sir James Bain.

Captain SYME seconded the motion, which was carried unanimously.

The CHAIRMAN said that the question of the remuneration of the directors for the ensuing year was now before the shareholders. He must observe that there was a great deal to do, and the directors had much anxiety besides. At present he could understand a certain amount of impatience amongst the shareholders, but those who were best capable of judging were of opinion that affairs were being most economically conducted. Let not the shareholders suppose that, because the concern was not paying a dividend, therefore they had less work and less anxiety, for the facts really lay in the contrary direction.

Mr. LECK then proposed that the remuneration between the five directors should be 100*l.* a year each. (Laughter.)

Another SHAREHOLDER proposed that it should be 250*l.* a year, "to commence after the first dividend had been paid." (Laughter.)

The SOLICITOR said it was incompetent to put such a motion.

Mr. SMITH proposed that the remuneration for the ensuing year should be 250*l.* to be divided amongst the directors according to their attendances. There was no doubt expenses were heavy, and there was a great desire to reduce them as much as possible, but, on the other hand, the shareholders could not expect a body of men in any position and standing to work for nothing. His experience in mines was that everything depended upon the energy of the management. Without the energy the shareholders would find the whole of the money eaten up in expenses before they got any profit. The shareholders must be prepared to pay their officers in a liberal but not in an extravagant remuneration.—The motion was seconded and carried.

The auditors—Messrs. J. and W. Graham—were then re-elected, at a remuneration of 30 guineas.

A vote of thanks to the Chairman and directors closed the meeting.

TREGEMBO MINING COMPANY.

At a meeting of the adventurers, held at the offices of the company, Union-court, Old Broad-street, on Wednesday—Mr. R. W. GOOLD in the chair—the notice convening the meeting having been read, a statement of accounts was laid before the meeting showing expenditure during the four months ending the last day of April:—Labour, 788*l.* 3s. 11d.; dues on account, 50*l.*; merchants' accounts, 358*l.* 1s. 9d. The most favourable reports from Capts. J. Gilbert and E. Chegwin were read:—

June 14.—The adit level is driven 16 fms. east of Pinnick's shaft, or about 23 fms. east of the cross-course, and the part of the lode now carrying in the end is 3 ft. wide, and from a sample I took as carefully as possible is worth for tin 30*l.* per fathom; but there is more of the lode standing in the south side of the level for probably 12 or 15 in. in width also producing some rich work for tin, and when taken down will give additional value to the lode. There has been a discovery very recently made in the south side of this level, about 4 fms. behind the end of a lode 1 ft. wide in easy ground for driving, and worth for tin about 8*l.* per fathom. This lode has been opened on for about 6 ft., and appears to have a bearing of 30° south of west; consequently, in going westward it is diverging very fast from the Tregembo lode, from which I am inclined to believe it must be a south caunter lode, which has formed an intersection about this place, and, if so, it is a very important feature in the future of the mine. As it may not only prove to be a very profitable lode of itself, but is also very likely, I think, to increase the value of the Tregembo lode about this intersection in the deeper levels. The engine-shaft is down 9 fathoms under the adit, and the ground so far has been very hard, but I am glad to see it is getting a little better, and that the water can be still kept easily with barrels, and is, therefore, not much impediment to the sinking. This shaft is being urged on with all possible speed, and I think you are getting the best results that can be attained from the miners' labour. The masons have finished the house for the winding and stamping engine and the loading for the whim cage, also the walls of the boiler house, and will complete the stack by the end of this week. Afterwards they will begin about the work necessary for the stamps, calciner, and dressing-floors, which should be hastened on as fast as possible during the summer months. I am very pleased to say I have never seen the prospects of the mine looking more encouraging than they are at the present time, and it is very gratifying to find that the explorations from the commencement have been constantly increasing the reserves of tin ground, and giving much additional value to the property.—JOHN GILBERT.

June 20.—The engine-shaft, sinking by 16 men, is now down 8 fms. 5¼ ft. from adit level, or 22½ fms. from surface. During last month we sunk 1 fm. 5½ ft., and the ground has become a little easier for sinking, but not so much so as I anticipated with the ground in its present state. We shall probably reach the 16 fm. level by the end of September if we are so fortunate as to be free from water as at present. After reaching that point we shall cross-cut to the Tregembo lode, a distance of about 12 fms. after cutting the lode, we shall no doubt have a plentiful supply of water for all purposes. The Tregembo lode is driven about 27 fms. east of cross-course, or 16 fms. from Pinnick's shaft, the lode today is 6 ft. wide, and worth 35*l.* per fathom. This adit has been driven about 230 fms., the deepest point from surface, being 18 fms. varying in value from 8*l.* to 45*l.* per fathom, and in size from 2 to 6 ft. wide for the whole distance.—The South or New Lode: Whilst driving on the Tregembo lode we intersected this lode about 6 fms. behind the present end, running in a south-westerly direction. We have driven on it about 2 fms., it is now 1 ft. wide, and worth for tin ore 9*l.* per fathom. The engine-house and boiler-houses are in readiness for the reception of the 60-in. cylinder engine, the boilers are in there places. We have on the mine spring beams, girders, cistern, timber for shears, and all heavy woodwork for the engine-houses. The engine-houses, boiler-houses, and stack, for the stamping and winding-engines are completed, and ready for the machinery. We expect next month to commence placing the machinery for both engines in their respective positions. Have engaged a tin dresser and assayer to lay out the dressing-floors, which shall commence forthwith. In the course of a few days the masons will commence building the calciner, stack, &c., for the burning of tin. By the time the engine-shaft is down and cross-cut driven at the 16 all surface arrangement will be in perfect readiness to return large parcels of tin at once.—E. CHEGWIN.

The CHAIRMAN, in moving the adoption of the accounts, said: This property is exciting a great deal of attention in Cornwall, especially in the lower part of the county, where all the circumstances connected with it, which are of a very remarkable character, are better known than elsewhere. It has been long known as a property which was traversed by four or five different lodes, and that the whole ground in it was of a highly mineralised character; many have been the applications, first and last, for permission to work it. In consequence of the fixed aversion of the proprietors to have mining operations carried on so near their dwelling every such application was up to a late period steadily refused. At some very remote period the mine had been worked, but to what extent, or even for what mineral, could only be conjectured, as although an old adit level had been driven into the hill it had been by some former proprietor walled up, and there could be seen at surface no evidence, such as is to be found on most abandoned mines in the shape of burrows to show what ores, if any, had been brought to surface. Tradition, we believe, said it was a copper mine; tradition, however, is not always correct. About a year and a half ago the enterprising and spirited firm of Harvey and Co., of Hayle, in conjunction with two London gentlemen, both largely connected with Cornish mining, obtained a grant of the sett, and immediately set to work to prove it. And now we come to a remarkable discovery made by them at the very outset of their explorations, so remarkable, in fact, that many will no doubt hesitate to give full credence to it until it has been proved to them to demonstration. Nevertheless, it is a fact incontrovertible, which anyone may have the opportunity of proving for himself. The ancient workers drove the adit level some 60 fathoms into the hill and cut the lode, then instead of driving east and west on its course they drove by the side of it for 170 fathoms in length, cutting through it in two or three places, but, astonishing to relate, they left every fathom of it standing entire. Now, from this level to surface is an average of at least 10 fathoms, in some places 16 or 17 fathoms. In the whole 170 fathoms driven so far as can be ascertained there is not a fathom of poor ground, not a fathom but will be stoped away at a good profit, and the same may be said of the lode in a shaft which the present workers have sunk as a drawing shaft which cut the lode a few fathoms from surface and carried it down to the adit level. It is a rich tin lode. So these fortunate adventurers suddenly found themselves, much to their own astonishment, no doubt, at the same time equally to their great gratification, possessors of 2000 fathoms of tin ground all opened out ready to hand, standing the whole in the dry, with nothing to do but to stope it away and dress it for market so soon as they can get the requisite stamps and floors ready, which will take some time yet. Further: As soon as the level had been cleared up and the value of the lode ascertained by careful independent examinations after cutting through it in other places and by careful assays, a pare of men were set to work to drive the end still further east, not by the side of the lode as was formerly done but on it, by which its value, fathom by fathom, could be more clearly and more correctly ascertained. 25 fathoms, worth from 20*l.* to 25*l.* per fathom, were driven when a cross-course was encountered, which heaved the lode slightly out of its bearing. Passing through this cross-course the lode was soon found again, and proved to be considerably richer east of it than it was on west. Up to this about 20 fathoms more have been driven, worth for tin from 30*l.* to 35*l.* a fathom, valuing at the present standard for tin. This drivage of 45 fathoms in all by the present workers will have added 670 fathoms to the 2000 left as a legacy by the former ones, making an aggregate of not far short of 3000 fathoms of reserves, all of which will come away presently at a large profit. We say a large profit, because although the lode for the last 45 fms. has been worth from 25*l.* up to 35*l.* a fathom, we have never paid above 4*l.* 15s. a fathom for driving the end. The lode is soft and quartzy, and can not only be driven on cheaply, but it will by-and-bye be found to cost very little for crushing, and we shall be able to pass large quantities easily and speedily through the stamps. In addition to these reserves they have brought to surface, and it lies there ready to be stamped, 800 or 1000 tons of lodestuff got from drivages alone, the whole of which will yield above 3 per cent. of tin. Several samples have yielded over 1 cwt. of tin to the ton, whilst one or two have given the surprising quantity of 3 cwts., but of course the latter were picked samples. Calculating only 3 per cent. they have here from drivage alone at surface 30 tons of tin, which at 60*l.* will yield 1800*l.*, while the reserves underground are already worth very many thousands. To further develope this remarkable property we are sinking a pumping or main shaft by a full pare of 16 men perpendicularly so as to cut the lode at about the 50. It is down nearly 10 fms. below adit, or 23 fms. from surface. When this is down 5 fms. more they will drive a cross-cut to the lode, and commence operations upon it at once. Should the lode be found here only as rich as in the lode above the value of their reserves and the value of their whole mine will be more than doubled immediately, and it is the opinion of all the mining experts who have inspected the property, including Captain John Gilbert, Capt. Thomas Hodge, and Capt. Edward Chegwin, that no man who has examined the 200 fms. of lode in sight in the 15 fm. level and the nature of the ground through which the main shaft is passing 10 fms. below as it is nearing the 30 could entertain any doubt whatever as to its being so found at that depth. And if at that depth why not at deeper ones? Can anyone point out an instance where a tin lode continuously rich for 200 fms. in length was ever found cut out in 20, 50, or 100 fms. in depth? Nor is this all. These 200 fms. are only a portion of the wealth we have in the adit level, for in the direction in which this level is being driven we have 300 more fathoms to drive before we reach our eastern boundary; and inasmuch as the lode was never richer than it is now in the end we are day by day pushing forward who can say we shall not find it run right away through the sett—a prospect which may not unfairly be contemplated. What a mine there would be here in such an event as that? A second fortunate discovery was made here within the last week or two. In driving east we came across a small branch upon which we have driven some 5 fms. It is diverging fast from our Tregembo lode proper, and may, therefore, turn out eventually to be either a parallel or a caunter lode; it is worth at present 7*l.* to 9*l.* a fathom. It may have an important influence some day upon the property, as should it be a caunter lode it is almost certain at its point of intersection with the main lode in depth to greatly enrich it. There are other points of great interest in connection with this sett which can only just be alluded to. There has been found another lode, called the Orchard lode, running through it, but up to this time the present adventurers have been too much occupied with the operations necessary to enable them to return tin from the main lode to admit of their doing much upon this one. However, there it is, and where opened on has yielded considerable quantities of copper. What it may lead to when explored later on is hard to say. Another lode—the Great Fancy lode of the district—will, it is believed, be found to run into this sett, and probably to intersect the Tregembo lode some 50 fms. or more before our present eastern end. A powerful 60-in. cylinder engine has been constructed for the mine, the house for which is completed, and the engine itself may be expected to be erected in two months from the present time. The house for the stamping and winding engine is completed. Two boiler-houses have been erected, and the boilers for both engines placed in their beds. A calcining-house and the floors requisite to dress large quantities of tin are now being proceeded with. It is expected that all the machinery, buildings, stamps, floors, and all dressing appliances will be ready by October, and it cannot be doubted that from the day they start we shall be able to return regularly and continuously a very large quantity of tin. To speak of the future success of this undertaking in the face of such facts would simply be idle. It would appear that success is here an accomplished fact. Can any one point to such another instance in the whole history of Cornish mining enterprise in our day?

SOUTH AFRICAN BRUSH ELECTRIC LIGHT AND POWER COMPANY.—An extraordinary general meeting of shareholders was held on Monday at the City Terminus Hotel, Lieut.-Col. George Coxon presiding, when a resolution was passed substituting for article 71 of the Articles of Association of the company another clause similarly numbered. The alteration referred to the circumstances under which it would be necessary for the office of director to be vacated, &c. In reply to questions, the Chairman stated that on the 11th ult. Messrs. Blaine and Macdonald, through whom they had purchased their property, received from their managing agent, Mr. Donald Macdonald, the following telegram:—"Have made a contract for Kimberley." It appeared that the question of the lighting of the town had been submitted to the ratepayers, and that there had been a good deal of opposition. A poll had been taken, which was carried by a majority of 21, but money was raised for the purpose of questioning the validity of the poll. About 10 days ago, however, they received another telegram from Mr. Macdonald, asking them to wire out an authority for him to sign in the name of the company the contract with the Mayor of Kimberley, representing the corporation of that town. They might, therefore, take it for granted that a contract had been entered into. It was true that the prospectus of the company stated that a town at the Cape was lighted up. The town referred to was Kimberley, and it had been lighted for weeks before as an experiment; but a contract had not been accepted. A shareholder observed that the statement in the prospectus was rather misleading, but the Chairman could not admit this. In reply to another question, Mr. Atkinson, a director, stated that it would be unwise to mention publicly the terms of the contract; but the shareholders might obtain the information at the office. The Chairman stated that Mr. Macdonald was returning home, when they hoped to give the fullest information concerning the affairs of the company.

[For remainder of Meetings see this day's Journal.]

Major Flood Page has resigned the post of manager of the Crystal Palace, and has accepted the office of general manager of the Edison Indian and Colonial Electric Company.

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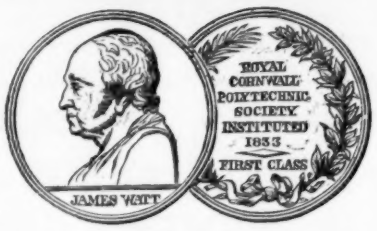

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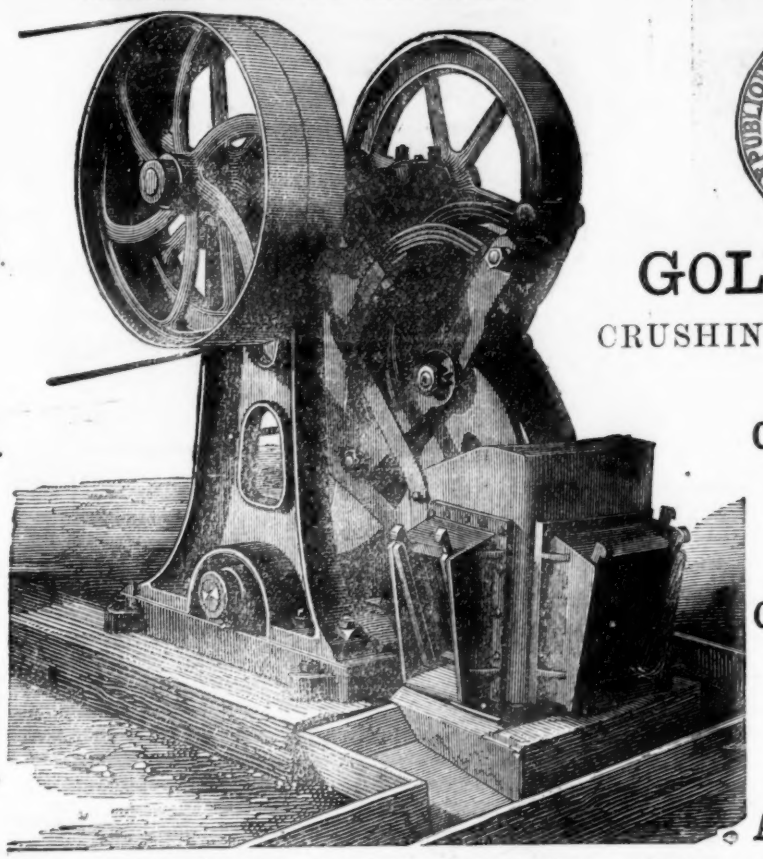

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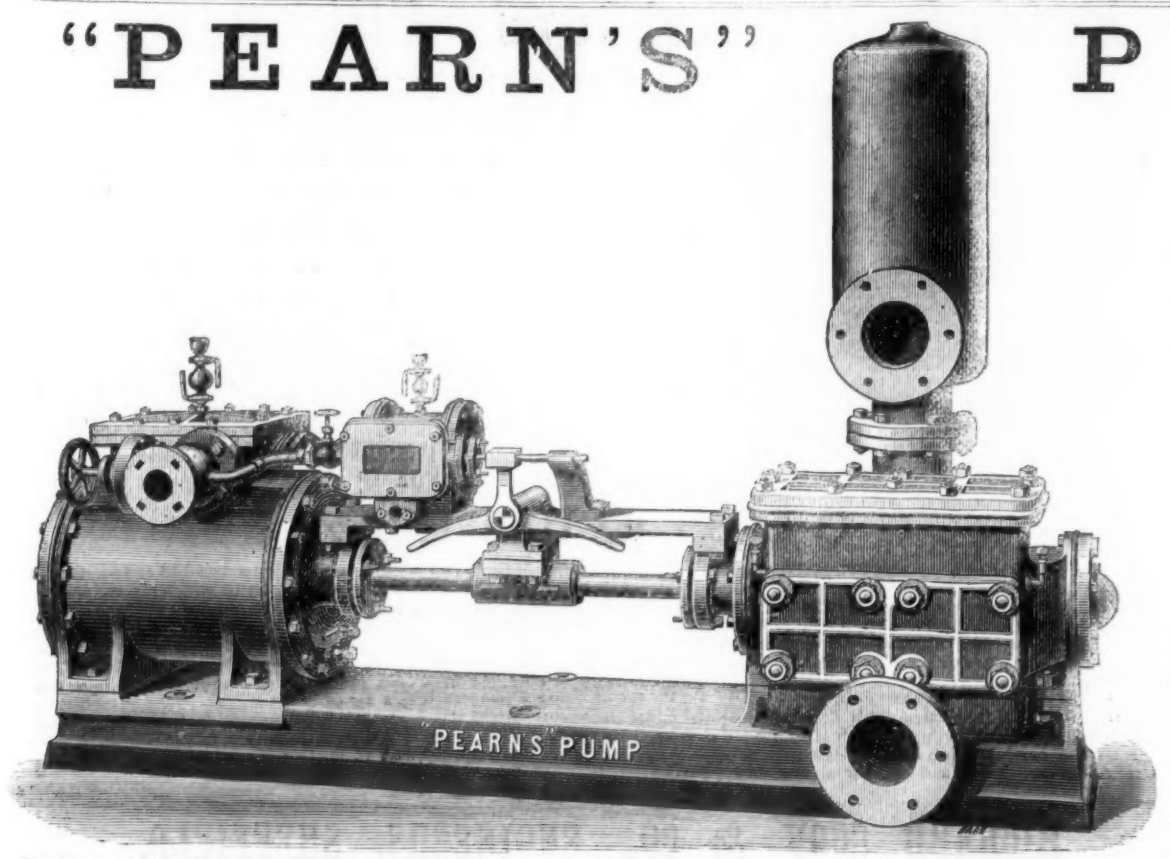

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FOREIGN MINING AND METALLURGY.

The forgemasters of the Nord have just held one of their periodical meetings at Valenciennes. The general report was that the orders on hand were nearly as important as those previously noted, and under these circumstances it was decided to maintain previous prices without hesitation. The offers of Belgian iron in the Nord have exerted no sensible influence upon the market, and the Valenciennes meeting also considered that the great strike in the iron trade in the United States would not be without some effect upon the iron trade of Europe. In the German coal trade the general aspect of affairs is considered to have slightly improved. Considerable quantities of coal have been forwarded to the Upper Rhine, and stocks have been proportionately reduced. Deliveries by railway have been less active than those effected by water. A reduction of 6d. per ton is announced in the rates charged for the conveyance of Westphalian coal to the ports of the Elbe. The Thy-le-Château Blast Furnace and Forges Company will pay on the 1st proximo a second dividend for 1881; this dividend amounts to 2*l.* per share. The dividend of the French Railway Plant Company for 1881 is announced at the rate of 9 per cent. per annum.

There is little news to communicate with respect to the Belgian iron trade. Mixed casting pig has made 1*l.* 18s. 4d. per ton in Belgium, and ordinary pig, 2*l.* 2s. 6d. per ton. Iron has been maintained in Belgium at about 5*l.* 4s. per ton. Girders have made 5*l.* 12s. per ton, and plates 7*l.* to 7*l.* 4s. per ton. Boiler plates have been quoted at 7*l.* 16s. to 8*l.* per ton. The authorities of Antwerp have just let a contract to the Meuse Workshops Company for the supply of steam-engines and accessories required in connection with the establishment of hydraulic apparatus along the new quays of the Escant and the Bassin de Batelage. Sir W. G. Armstrong and Co., of Newcastle-upon-Tyne, and the East Ferry Road Engineering Works Company, London, tendered for the supply of the engines and accessories, but without success, there being a margin of nearly 2000*l.* between the highest Belgian tender (that of the John Cockerill Company) and the tender of Sir W. G. Armstrong and Co. The German iron trade presents the same characteristics as those which have been noticed in it of late. If anything, however, there has been a slight improvement in affairs, orders having become a little more numerous. Iron and bars has made 7*l.* per ton at Dusseldorf, ordinary plates 10*l.* 10s. per ton, and boiler plates 11*l.* per ton.

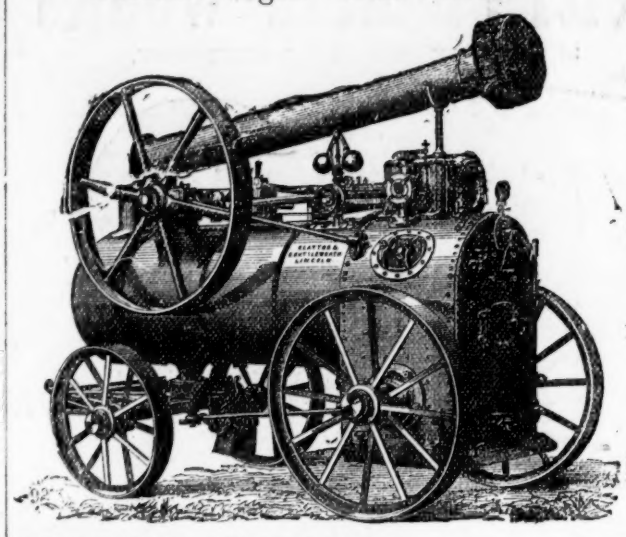
The intelligence received with respect to the Belgian coal trade is fairly satisfactory, but prices have experienced no material change. Deliveries have been active, and the demand has been well sustained. At Liége, as well as at Charleroi, there are scarcely any stocks at the pits' mouths. There has also been little or no accumulation of stocks in the Couchant du Mons. Unless the aspect of metallurgical affairs should become discouraging, an advance in prices is anticipated upon the Belgian iron markets in the autumn or winter. Statistics have just appeared showing the great increase which has taken place during the last 10 years in the consumption of coal in France. In 1860 this consumption amounted to 15,000,000 tons in round figures. It 1870 it had been carried to 19,000,000 tons, and in 1880 to 28,000,000 tons. Paris consumed in 1850 only 654,000 tons per annum. In 1860 the consumption had increased to 1,471,000 tons, and in 1880 it had been carried to 2,912,000 tons. During the last six years alone the increase in the consumption of coal in Paris is estimated at 1,049,000 tons per annum. The movement of combustibles over the Northern of France Railway amounted in 1860 to 1,875,000 tons; in 1873 it had risen to 3,567,000 tons; and in 1880 it had been further carried to 7,176,000 tons. Coal stocks in France have been generally much reduced, and are now smaller than they have been at mid-summer for several years past. Contracts concluded in the Nord and the Pas de Calais will absorb almost the whole of the production of the collieries of those districts for some months, so that colliery proprietors will, it is believed, be enabled to advance their rates.

BOILERMAKERS' READY RECKONER.—It is acknowledged that there is risk of inaccuracy in making close calculations, when performing it may be heavy manual labour, and it is also well known that accuracy frequently leads to considerable saving by preventing unnecessary waste. Boilermakers will, therefore, readily recognise the value of Mr. COURTNEY'S Boilermakers' Ready Reckoner, with examples of practical geometry and templating for the use of platers, smiths, and rivetters, which has just been issued by Messrs. Crosby Lockwood and Co., of Stationers' Hall Court. The geometrical portion is at once concise and useful, and there are 22 tables which will meet every calculation. The tables are clearly printed, and so arranged that they can be referred to with the greatest facility, so that it cannot be doubted that they will be generally appreciated and much used.

CHICAGO INDEXED MAPS.—The carefully executed maps of the various States and Territories constituting the United States of America have been from time to time referred to in the *Mining Journal* when the map of one or other of the separate States has been published. Messrs. Rand, McNally, and Co. have now issued a "County Map of the United States and Dominion of Canada," which is as well executed as its predecessors, but really contains comparatively little with reference to Canada, since it shows only so much of the eastern portion that lies south of the 49°, and even that is not coloured nor filled in. As a map of the United States to be carried in the pocket or kept in the desk, however, it leaves nothing to desire.

THE EARNINGS OF GOLD DIGGERS.—The statistics of the colony of Victoria, prepared by Mr. HAYTER, the Government statist, shows how completely the business of gold digging has been deprived of its old feverish excitement, and has subsided into a regular pursuit offering what in the colonies must be considered very humble remuneration. The value of the gold obtained in 1880 per miner was a trifle under 82*l.*, representing only about 20 ozs.; but as Mr. Hayter points out the common assumption that this indicates the digger's "average earnings" is a fallacy, the fact being that a very large proportion are merely employees of companies and others using expensive plant, and are, therefore, working at wages which necessarily average considerably less. Yet the number of men who are content to follow this branch of colonial industry amounts to 38,568, which, though much less than the 63,787 who were at work in 1869, is still a large number in a population of only about 800,000. These facts afford at least a sufficient answer to the old fears of depreciation in the value of gold owing to its supposed greatly diminished cost of production.

1880-81.—MELBOURNE (AUSTRALIA) EXHIBITION.
Portable Engine—Gold Medal. Thrashing Machine—Gold Medal.



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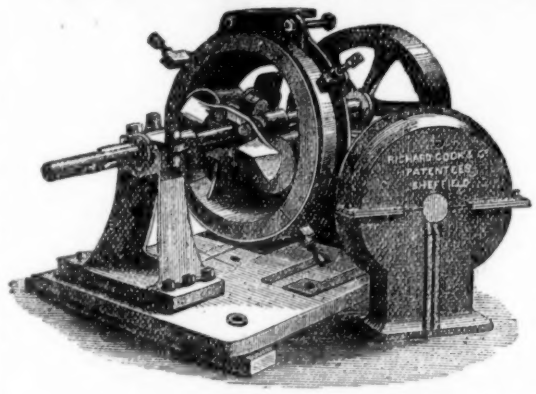
(Two tons per hour with 5 horse power actual,)
For reducing to an impalpable powder, or to any requisite degree of fineness, all materials capable of being thus treated. CEMENT, CHEMICALS, GRAIN, COAL, COLOURS, PHOSPHATES, LIME, COPPER, TIN, ZINC, and other Ores with rapidity, completeness, and perfect uniformity.



THE ONLY GUARANTEED MACHINE FOR
GOLD QUARTZ.

This mill consists of a circular iron casing, the section being elliptical in form, and is fixed vertically on a firm bed or foundation plate, a shaft runs through the centre of the casing on which is keyed a series of arms, in the extremities of which revolve two or more slightly oblong iron rollers, which, when put in motion, fly off from the centre and run upon the interior periphery of the casing, and by centrifugal force crush and pulverise the article under treatment.

The effect produced by this system is most extraordinary in its practical results, the power required is small in consequence of the comparative absence of friction from the working parts of the mill, the combined results of the rolling action of the crushers and their impact by centrifugal force on the material, being the same in kind, but in degree far exceeding that of edge runners, the sides of the casing are formed as open wire sieves of the degree of fineness required, and a series of propelling blades attached to and revolving with the central shaft drive the material under treatment through the sieves as it is pulverised; by this arrangement the degree of fineness can with certainty be arrived at from coarse to extreme fine, and that with uniformity

Intending purchasers can at all times satisfy themselves by sending the material they wish to operate on, and seeing it ulverised Over 300 in use. Prices and testimonials free on application.

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Special Rock Drill Steel.
Mining Tools, Files, Saws, Hammers, and Picks.
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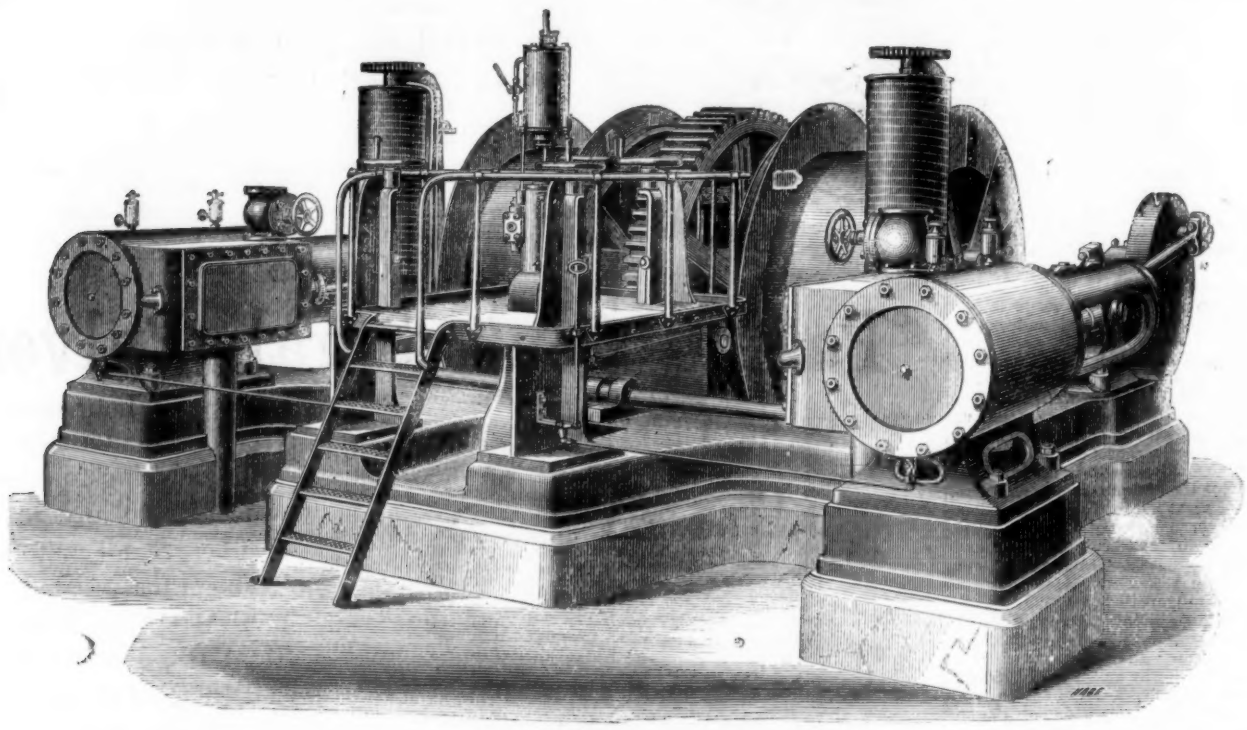
HAULING & WINDING ENGINES,

WITH STEAM REVERSING GEAR.

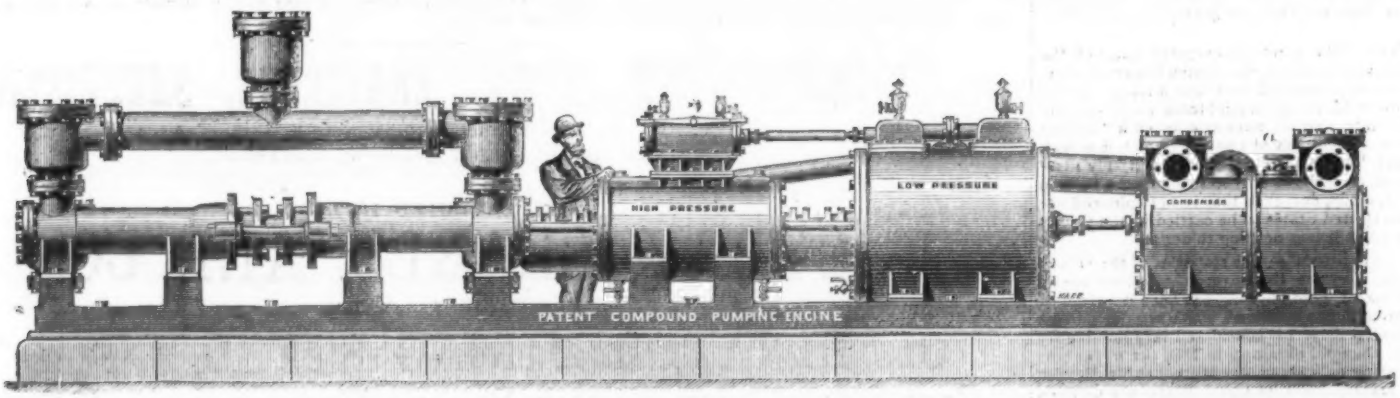


TANGYE'S DIRECT-ACTING

COMPOUND PUMPING ENGINE

For use in Mines, Water Works, Sewage Works,

And all purposes where Economy of Fuel is essential.



SUCCESSFULLY WORKING at the NEWCASTLE and GATESHEAD WATERWORKS, the ADELAIDE, CHESTERFIELD and BOYTHORPE, WYKEN, and other COLLIERIES.

CATALOGUES FORWARDED ON APPLICATION.

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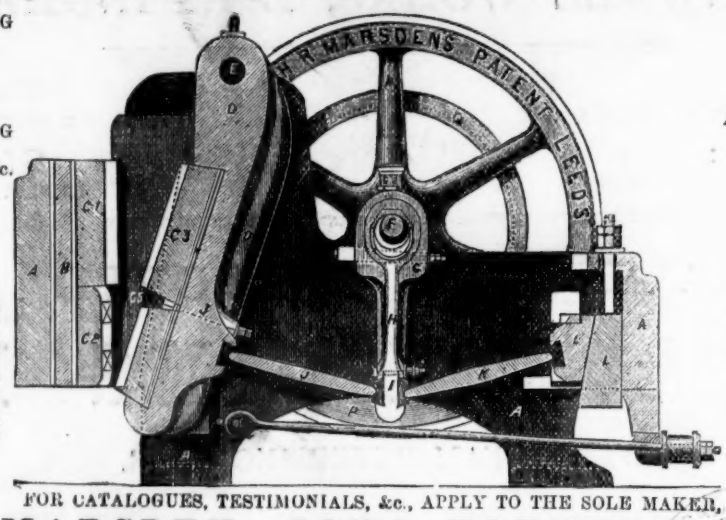

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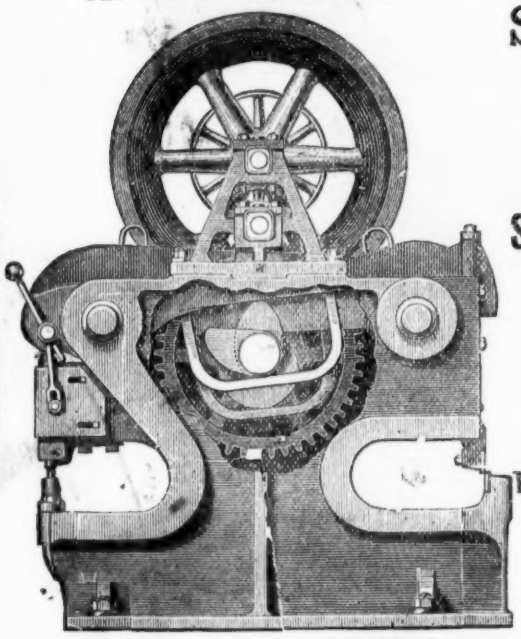

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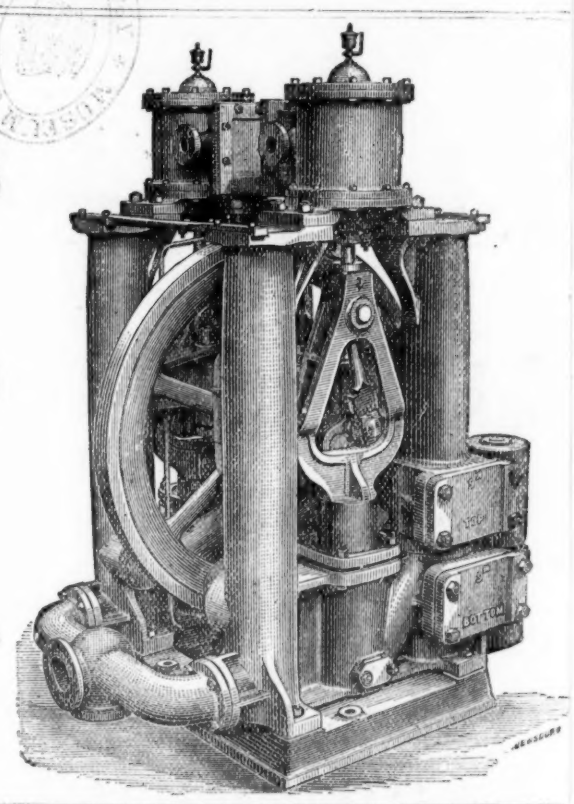

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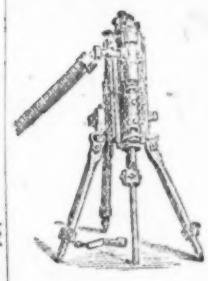

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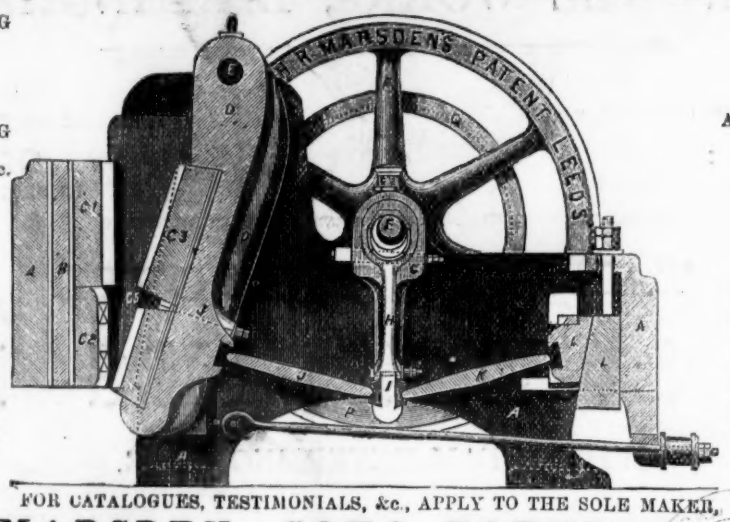

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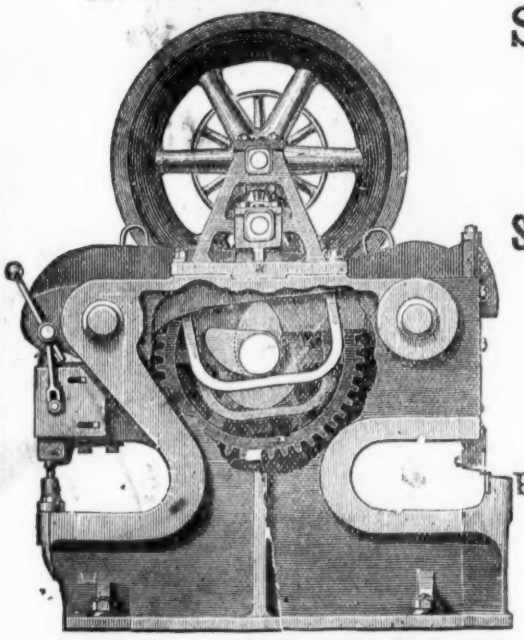

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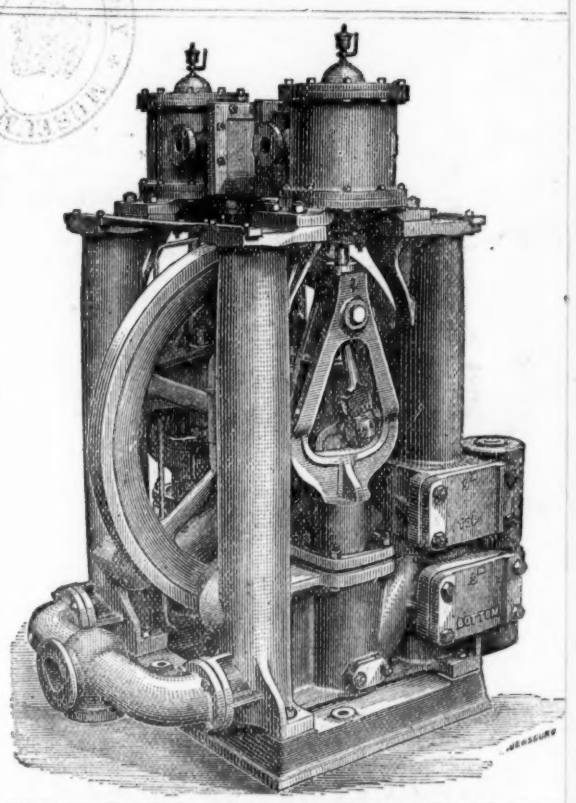

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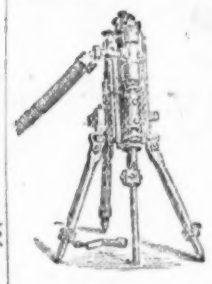

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